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North Central Forest Experiment Station

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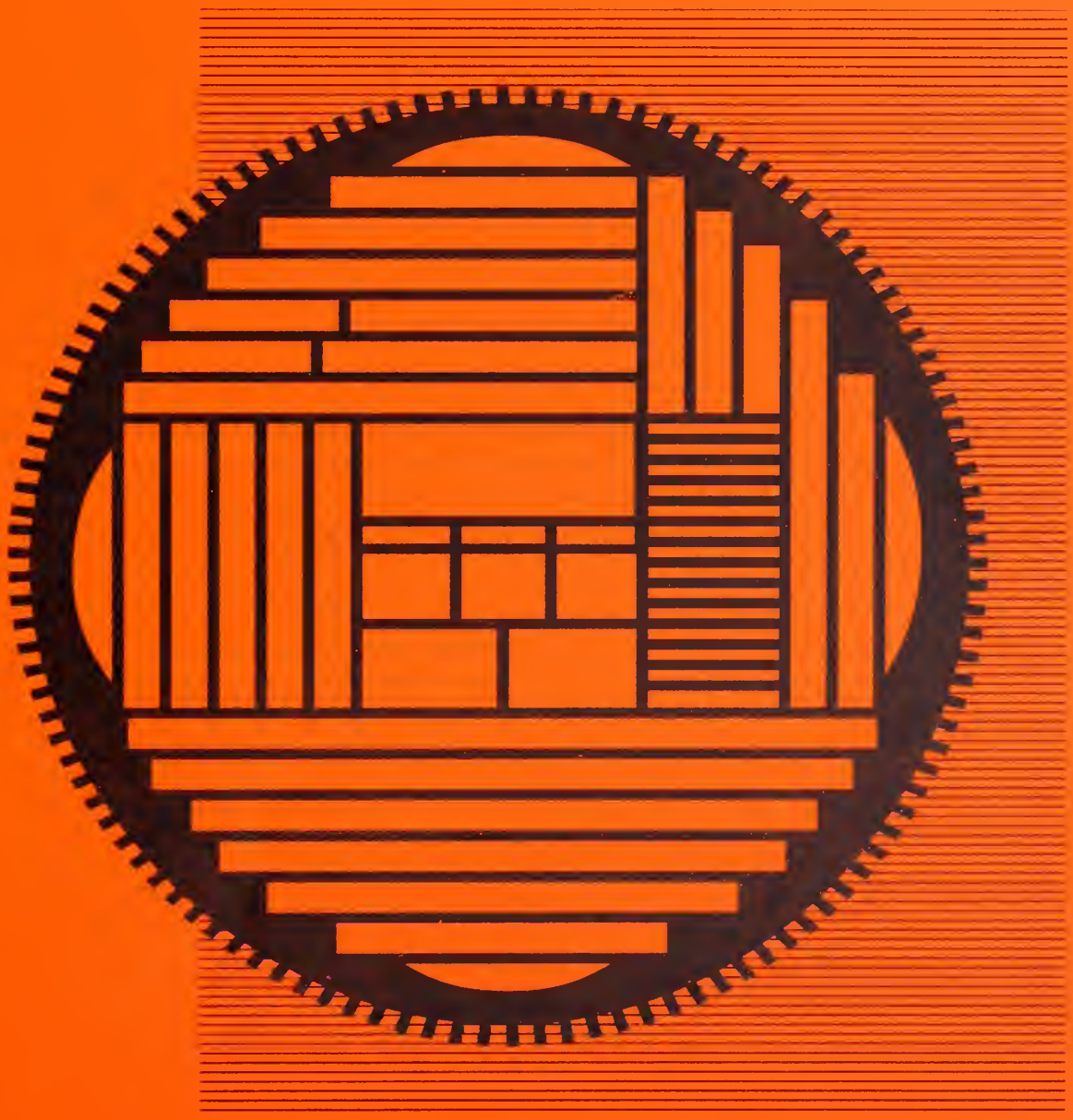
Missouri Timber Industry—An Assessment of Timber Product Output and Use

W. Brad Smith and Shelby Jones



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FOREWORD

This bulletin discusses recent Missouri forest industry trends and contains the results of a detailed study of forest industry, industrial roundwood production, and associated primary mill wood and bark residue in Missouri in 1987. Such detailed information is necessary for intelligent planning and decisionmaking in wood procurement, forest resource management, and forest industry development. Likewise, researchers need current forest industry and industrial roundwood information for planning projects.

Special thanks are given to the primary wood-using firms that supplied information for this study and to the Missouri Department of Conservation foresters who canvassed these respondents. Their cooperation is greatly appreciated.

All references to red oak in this paper are for the red oak group, which excludes black oak but includes northern red oak, cherrybark oak, shumard oak, scarlet oak, southern red oak, shingle oak, blackjack oak, water oak, and pin oak. Similarly, all references to white oak are for the white oak group, which includes white oak, swamp white oak, bur oak, swamp chestnut oak, chinkapin oak, overcup oak, and post oak.

All board foot data in this report have been converted to International 1/4-inch scale by applying a multiplier of 1.38 to all saw log and handle bolt volumes reported in Doyle scale by sawmills and handle mills and by applying a multiplier of 1.14 to all veneer log and cooperage log volumes reported in Doyle scale by veneer and cooperage mills. To convert to Doyle log scale, multiply the International scale volume for saw logs and handle bolts by 0.7246, and multiply the International scale volume for veneer logs and cooperage logs by 0.8772.

The last study of industrial roundwood output in Missouri was conducted in 1980. Data in this report are compared with the 1980 study results. Quantities shown may vary slightly from one table to another because of rounding differences, but these differences are usually insignificant.

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Missouri Timber Industry — An Assessment of Timber Product Output and Use

W. Brad Smith and Shelby Jones

HIGHLIGHTS

- Missouri industrial roundwood production climbed to 100.0 million cubic feet in 1987 from 87.6 million cubic feet in 1980.
- Saw logs accounted for 90 percent of the industrial roundwood harvest compared to 82 percent of the harvest in 1980.
- Red oak, black oak, and white oak, the leading species cut, supplied 73 percent of the total harvest.
- Saw log production rose from 406 million board feet in 1980 to 511 million board feet in 1987.
- Principal saw log species were red oak, white oak, black oak, cottonwood, and shortleaf pine.
- Average lumber output per sawmill rose 97 percent between 1969 (670 thousand board feet) and 1987 (1,320 thousand board feet).
- During 1987 Missouri produced 28 thousand cords of pulpwood, 4 thousand cords higher than in 1980.
- Missouri loggers cut 4.7 million board feet of veneer logs in 1987, 42 percent more than in 1980.
- Missouri veneer mills imported 81 percent of their log requirements from 7 States.
- Logging residue generated in 1987 was estimated to be the equivalent of 801 thousand cords of pulpwood, enough to supply two, 600 ton/day pulpmills for 1 year.
- Forty-nine percent or more of each residue class (coarse, fine, bark) generated at Missouri primary mills was used.

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PRIMARY FOREST INDUSTRY - INDUSTRIAL ROUNDWOOD

Sawmills dominate the Missouri primary timber industry both in number and in terms of volume of wood used. Of 491 primary mills operating in 1987, 410 were sawmills. Active (operating) mills declined from 599 in 1980. Small sawmills (each cutting less than one-half million board feet of lumber annually) constituted most of the mill losses. Since 1980 the number of large sawmills has increased by 5 and the number of medium-size sawmills has gone up by 6. Large and medium-size sawmills are scattered throughout Missouri, but the heaviest concentration is in the Eastern Ozarks Unit (fig. 1).

Industrial roundwood production in 1987 rose 14 percent from 1980 levels; only the Northwest Ozark Unit showed a decline (fig. 2). Losses in the Northwest Ozarks were due to the closing of several saw and cooperage mills. Significant gains were posted in the Riverborder Unit where saw log production in 1987 rose more than 50 percent from 1980.

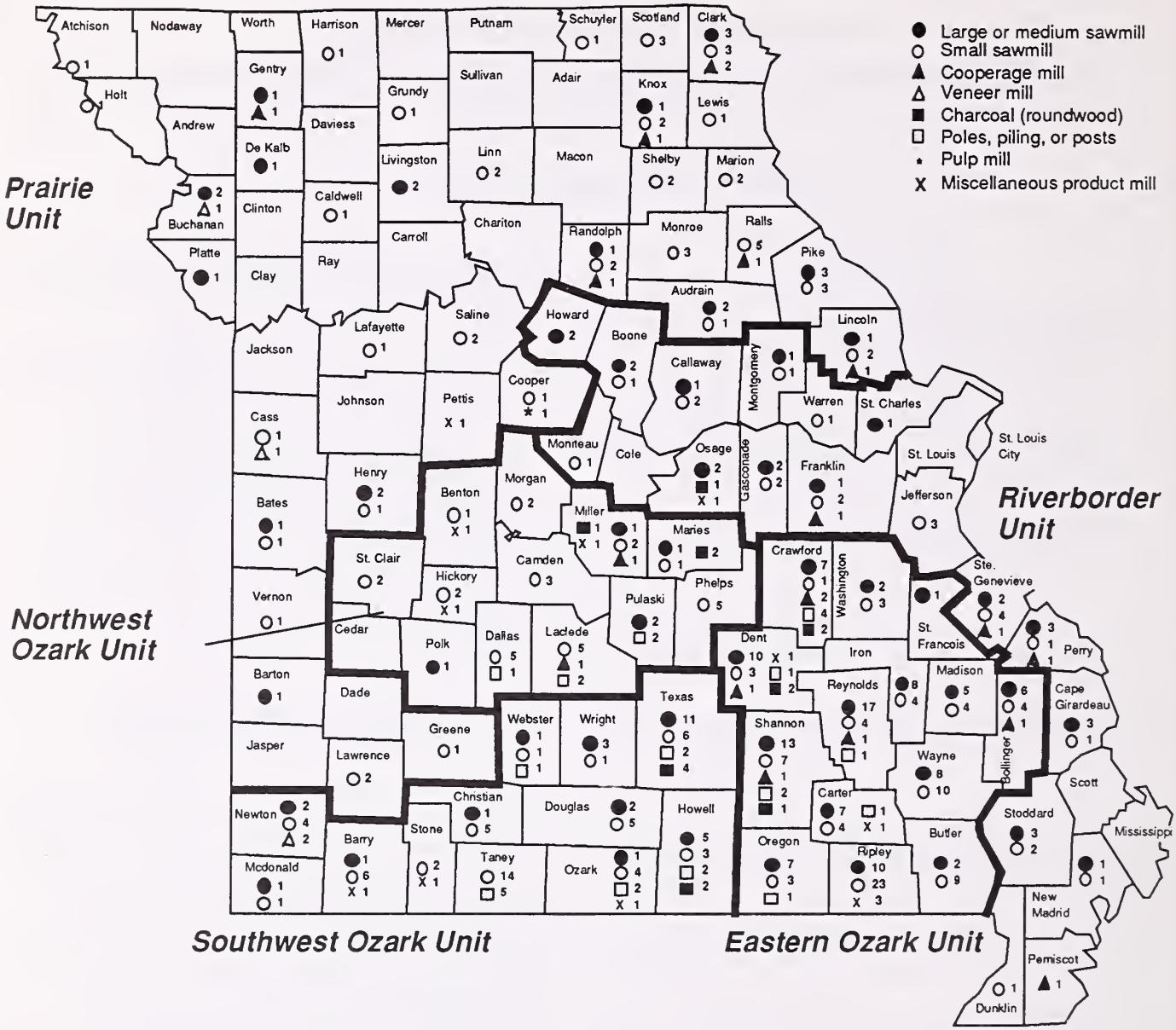

Figure 1.—*Primary wood-using plants in Missouri, 1987.*

Saw logs continue to increase their dominance in industrial roundwood production. In 1987 saw logs accounted for 90 percent of total roundwood production *(excluding residential fuelwood)*, up from 82 percent in 1980. Veneer logs were second in volume, followed by charcoal, pulpwood, and cooperage.

Red oak led all other species in output (production), followed by white oak, black oak, and shortleaf pine. Together, these four species provided nearly 80 percent of the roundwood harvest, and the oaks alone provided 73 percent. Other important species were cottonwood, sycamore, black walnut, and hickory.

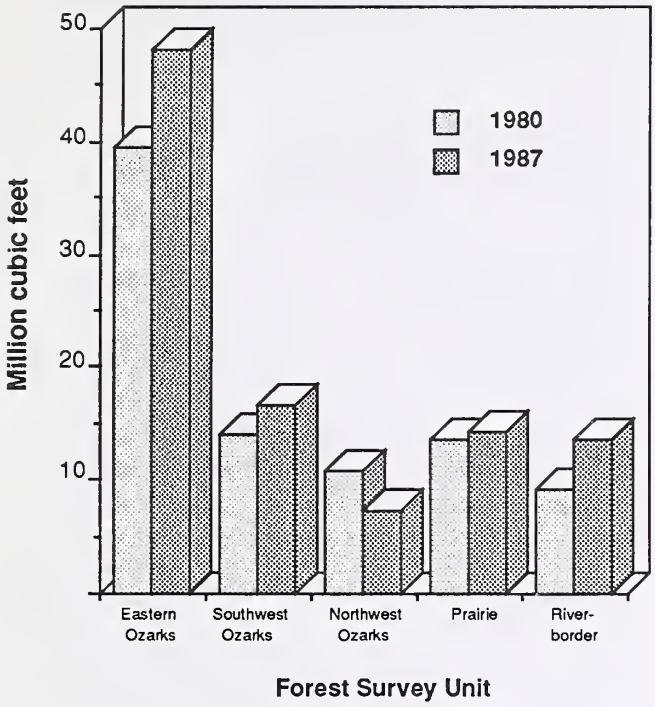

Figure 2.—*Industrial roundwood production by Forest Survey Unit in Missouri, 1980 and 1987.*

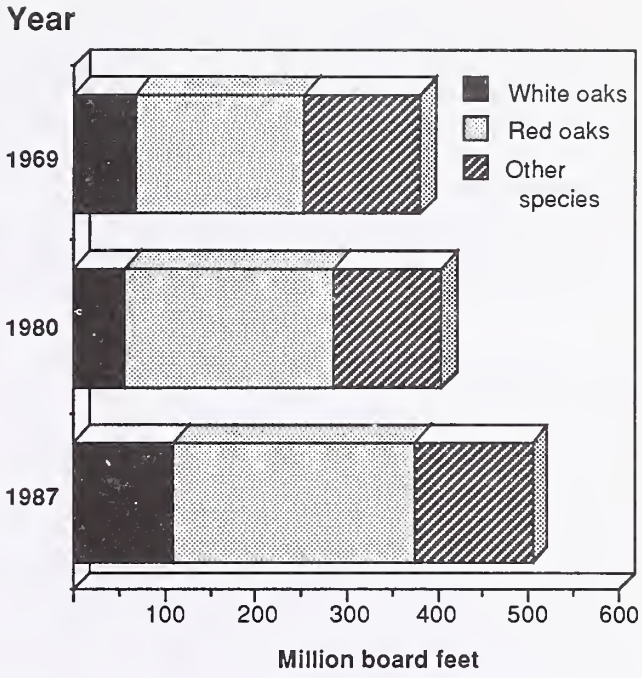

Figure 3.—*Saw log production by major species category in Missouri, 1969, 1980, and 1987.*

SAW LOGS

Missouri loggers delivered 509 million board feet of saw logs to in-State mills in 1987, which is 26 percent more than in 1980. More than 90 percent was hardwood. Principal species harvested were red oak, white oak, black oak, cottonwood, black walnut, sycamore, and hickory. The oak groups continued to capture an increasing share of total production, climbing from 66 percent in 1969 to 74 percent of total saw log production in 1987 (fig. 3).

Only 6 million board feet were shipped out-of-State, primarily to Iowa, Kansas, and Arkansas. Black walnut accounted for 51 percent of the volume exported.

Major production gains since 1980 were in white oak (increase of 53.0 million board feet), red oak (37.5 million board feet), and shortleaf pine (9.6 million board feet). Production dropped more than a million board feet from 1980 for each of six species groups—walnut, sweetgum, sycamore, tupelo, birch, and hard maple.

More than half of the total volume harvested of nine species groups came from the Eastern Ozarks Unit—red oak, white oak, black oak, hickory, sweetgum, tupelo, hard maple, shortleaf pine, and cypress.

Missouri sawmills imported 40 million board feet of saw logs from seven States, but primarily from Illinois, Arkansas, Kansas, and Kentucky. These four States furnished nearly one-fifth of the walnut log volume processed at Missouri sawmills. Saw log imports were widespread in Missouri, ranging from none reported for the Northwest Ozarks Unit to 19 percent of total saw log receipts in the Riverborder Unit.

Average annual lumber output per sawmill rose 97 percent from 670 thousand board feet in 1969 to 1,320 thousand board feet in 1987. Output continues to rise because most mills that close are small, most new mills are larger than average, and other mills have increased their productivity.

VENEER LOGS

Of the 4.7 million board feet of veneer logs cut in 1987 in Missouri, only 14 percent remained in the State, 3 percent was shipped to Illinois, and the remainder was exported. White oak constituted 53 percent of domestic production, black walnut 20 percent, ash 13 percent, and cottonwood 10 percent. White oak, walnut, and ash were the chief exports from Missouri (fig. 4).

The trend in veneer log production appears to be unsettled, with the 1987 harvest 44 percent above that of 1980. However, declines in output occurred in all species except white oak, which rose by 155 percent.

Five Missouri veneer mills received 3.4 million board feet of logs and bolts. Imports totaled 2.8 million board feet from seven States. Of these States, Tennessee and Kentucky each contributed more than one-half million board feet.

Cottonwood was the major veneer species processed in Missouri, followed by white oak, black walnut, red oak, and shortleaf pine.

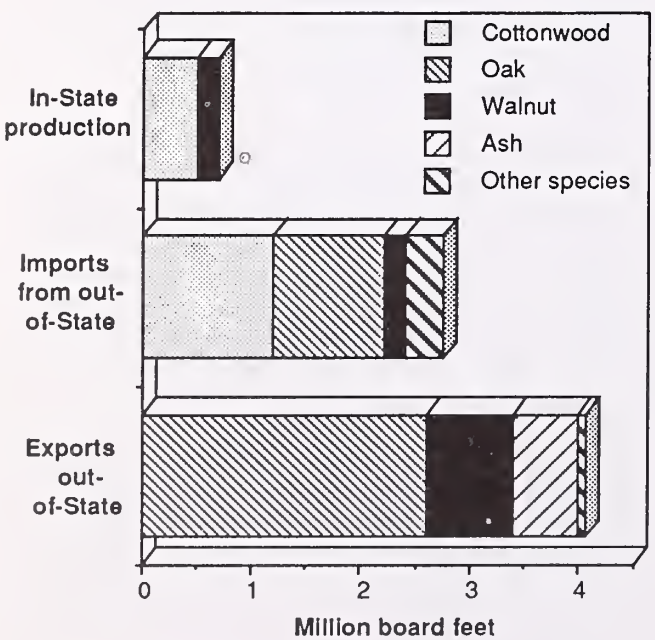

Figure 4.—*Veneer log production, imports, and exports by major species category in Missouri, 1987.*

About two-thirds of the cottonwood was imported, mainly from Tennessee and Kansas. Kentucky and Iowa were primary sources of white oak. Illinois, Kansas, and Iowa were large suppliers of walnut.

COOPERAGE LOGS

The cooperage industry has undergone many changes in the past 20 years. By 1987 only about a dozen cooperage mills were still using barrel saws for cutting staves; newer mills were producing flat-sawn staves. The number of mills producing cooperage in Missouri dropped from 36 in 1969 to 20 in 1987. Cooperage production has dropped 77 percent since 1969 when 53.7 million board feet were produced. All of the 10.4 million board foot harvest for cooperage logs was in white oak for the manufacture of tight cooperage.

Two major trends in recent years have been consolidation of major barrel producers and the growth in consumer preferences for lighter whiskies and non-distilled alcoholic beverages. Additionally, buyers of wine and scotch barrels, currently in demand, are trying to build inventories as they reel under sharply rising barrel prices (currently $50-$80).

CHARCOAL

The information presented in this report pertains to primary production of products from roundwood. Table 16, however, shows how much residue material went into the production of charcoal. At least 10 operations in the State use residues exclusively for charcoal production, but they are not included as primary mills in table 1 because they do not process roundwood.

The most significant change in the charcoal industry over the last 30 years is the continued decline in the use of roundwood in charcoal production (fig. 5). In the 1950's charcoal wood came almost exclusively from roundwood. Production from roundwood plummeted from a peak of 239 thousand cords in 1969 to 39 thousand cords in 1987. Changing markets, technology, and environmental concerns have all played a major role in reshaping the industry. Low stumpage prices for wood going

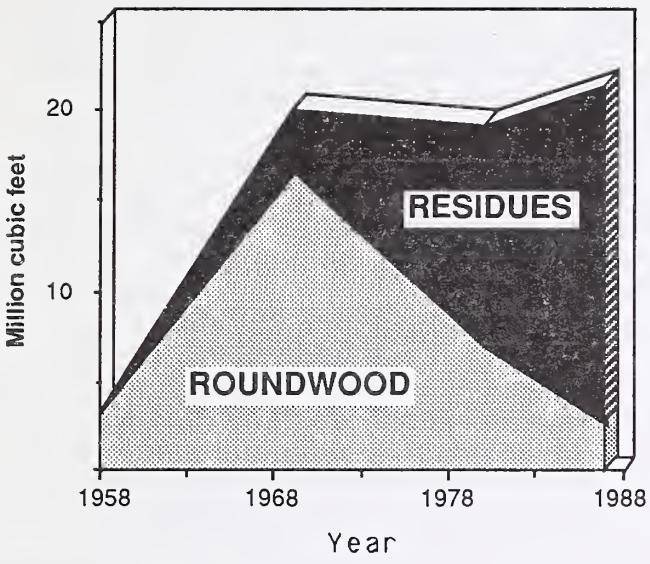

Figure 5.—*Charcoal production by source of raw materials in Missouri, 1958-1987.*

to charcoal and environmental legislation to prohibit large-scale burning of mill residues have had the greatest impact. The culmination of these forces is an industry that today draws more than 80 percent of its raw material from mill residues. The number of producers has declined from a high of 60 in 1958 to the current level of 15.

Missouri continues to be the top producer of charcoal wood, and the industry continues to weather the changing consumer preference for gas barbecue grills. Oak accounts for 87 percent of all charcoal produced from roundwood; hickory contributes another 9 percent. Production from all sources is concentrated in the three Ozark Units. Taking into account the use of residues, overall production of charcoal is up about 3 percent since 1969.

PULPWOOD

Since 1955 (when Missouri pulpwood production data were first compiled), pulpwood production has been on an upward trend, although one of the State's two active pulpmills (GAF Corporation in Kansas City) closed in 1980. In 1955, only 1,200 cords of pulpwood were produced from roundwood. In 1972 production rose above 100 thousand cords for the first time, and in 1987 Missouri produced 111 thousand cords of pulpwood. Of every 100 cords 74 were residue from sawmills, veneer mills, and other mills; and 26 were roundwood.

All of the roundwood pulpwood was harvested in the Prairie and Riverborder Units during 1987. Principal species cut in 1987 were soft maple, cottonwood, white oak, red oak, sycamore, willow, and hackberry.

OTHER PRODUCTS

Nearly 2 million posts were cut in 1987, primarily from pine, cedar, oak, and osage-orange. Pine poles, oak piling, and hickory handle bolts were the other major miscellaneous products from Missouri in 1987. These products accounted for only 2 percent of all industrial roundwood cut in Missouri in 1987.

LOGGING RESIDUE

During 1987 loggers in Missouri generated an estimated 63.3 million cubic feet of logging residue. Logging residue includes all wood fiber (growing stock and nongrowing stock) left behind from trees cut during logging operations and not subsequently used. Almost three-fourths of all residues are generated in the Ozark Units. The primary residue species are red and white oaks.

Production of logging residue by Survey Unit was:

Survey Unit	Residue volume	
	(million cubic feet)	*(Percent of total)*
Eastern Ozarks	32.2	51
Southwest Ozarks	10.1	16
Northwest Ozarks	3.8	6
Prairie	9.0	14
Riverborder	8.2	13
Total	63.3	100

PRIMARY MILL RESIDUE

In Missouri during 1987, primary wood-using mills generated 739 thousand green tons of coarse residue, 446 thousand green tons of fine residue, and 319 thousand tons of bark. Much of this residue was used; 85 percent of the coarse, 49 percent of the fine, and 83 percent of the bark. Pulpmills consumed 24 percent of the coarse residue for fiber products, and households consumed 12 percent for fuel. Although 25 percent of the fine residue was used for industrial fuel and charcoal, nearly 51 percent went unused.

Residues continue to play an important role in Missouri's wood-using markets; the proportion of unused residues continues to decline (fig. 6). Unused residues have dropped from 34 percent in 1969 to 26 percent in 1987.

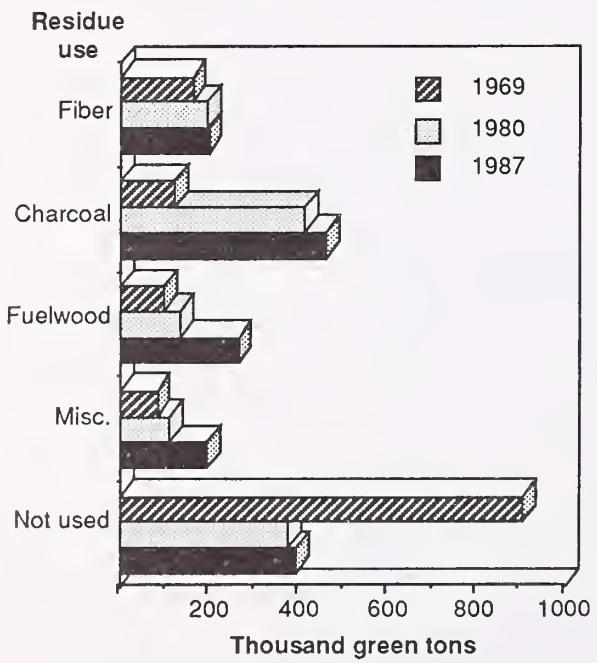

Figure 6.—*Disposition of mill residues by major use in Missouri, 1969, 1980, and 1987.*

Counties each producing more than 25 thousand green tons of coarse and fine residue in 1987 were Bollinger, Carter, Dent, Madison, Reynolds, Ripley, Shannon, Wayne, Howell, Texas, and Perry. Estimates of residue in 1987 by type of use for each county are found in the Appendix. Individuals or firms desiring residue information can use the county data (table 16) to pinpoint areas with the highest residue concentrations.

OUTLOOK

Growth of the U.S. economy, and particularly the economy of the Midwest, will be a major factor in determining the rate of growth in demand for Missouri industrial roundwood products. Changes in demand for housing, furniture, pallets, railroad ties, blocking, paper, and paperboard are all vitally important to Missouri's primary wood-using industry.

Between 1980 and 1987, the average annual changes in roundwood production for saw logs, pulpwood, veneer logs, cooperage logs, charcoal, and all industrial roundwood were:

Industrial roundwood product	Average annual change *(Percent)*
Saw logs	+3.7
Veneer logs	+6.3
Pulpwood	+2.1
Cooperage	- 57.4
Charcoal (from roundwood)	- 9.0
All products	+2.0

APPENDIX

STUDY METHODS

Data for this publication came from canvassing (with a formal questionnaire) all of the known primary wood-using mills that use Missouri logs and bolts. The study was a cooperative effort of the Missouri Department of Conservation (MDC) and the North Central Forest Experiment Station (NCFES). MDC foresters personally canvassed all the known Missouri primary mills (except one pulpmill). MDC forest products specialists provided estimates based on prior knowledge and contacts for a few Missouri mills that did not furnish complete data.

The NCFES mailed a formal questionnaire to the Missouri pulpmill and all out-of-State mills using Missouri roundwood. Follow-up on nonrespondents was by mail and telephone.

Logging utilization factors were used to estimate the logging residue. These factors were determined from Missouri logging utilization studies done by the NCFES during 1971-1972 and 1986-1987.

The NCFES edited and compiled the data.

SAMPLING ERROR

Because all primary wood-using mills were canvassed, there is no sampling error for data on the roundwood products they used or the wood and bark residue they generated.

DEFINITION OF TERMS

Coarse mill residue.—Wood residue suitable for chipping such as slabs, edgings, and veneer cores.

Consumption.—The quantity of a commodity, such as saw logs, utilized.

Fine mill residue.—Wood residue not suitable for chipping, such as sawdust and veneer clippings.

Forest industry land.—Land owned by companies or individuals operating primary wood-using mills.

Forest Survey Unit.—A geographic area (group of counties) used by the Forest Inventory and Analysis Project to report periodic inventories and use of the Nation's forest resources.

Industrial roundwood products.—Saw logs, pulpwood, veneer logs, poles, commercial posts, piling, cooperage logs, particleboard bolts, shaving bolts, lath bolts, charcoal bolts, and chips from roundwood used for pulp or board products.

Industrial roundwood production.—The quantity of industrial roundwood harvested in a geographic area.

Industrial roundwood receipts.—The quantity of industrial roundwood received in a geographic area regardless of the geographic source.

Logging residue.—The unused portions of trees cut or killed by logging.

National Forest land.—Federal land that has been legally designated as National Forest or purchase units, and other land under the administration of the USDA Forest Service.

Primary wood-using mills.—Mills receiving roundwood or chips from roundwood for processing into products.

Primary wood-using mill residue.—Wood materials (coarse and fine) and bark generated at manufacturing plants from roundwood processed into principal products. These residues include wood products (by-products) obtained incidental to production of principal products and wood materials not utilized for some product.

Roundwood.—Logs, bolts, or other round sections cut from trees (including chips from roundwood).

Standard cord.—A stack of wood bolts (or the equivalent) encompassing 128 cubic feet of wood, bark, and air space. A cord of pulpwood contains 79 cubic feet of wood and 49 cubic feet of bark and air space.

State land.—Land owned by States or land leased to these governmental units for 50 years or more.

Timberland.—Forest land producing or capable of producing crops of industrial wood and not withdrawn from timber utilization by statute or administrative regulation. Generally, this includes areas suitable for growing crops of industrial wood in excess of 20 cubic feet per acre annually.

COMMON AND SCIENTIFIC NAMES OF TREE SPECIES MENTIONED

SOFTWOODS
Cypress ..... *Taxodium distichum*
Shortleaf pine ..... *Pinus echinata*
Eastern redcedar ..... *Juniperus virginiana*

HARDWOODS
Ash
- White ash ..... *Fraxinus americana*
- Green ash ..... *Fraxinus pennsylvanica*
- Blue ash ..... *Fraxinus quadrangulata*

American basswood ..... *Tilia americana*
Beech ..... *Fagus grandifolia*
River birch ..... *Betula nigra*
Tupelo
- Blackgum ..... *Nyssa sylvatica* var. *biflora*
- Black tupelo ..... *Nyssa sylvatica* var. *sylvatica*
- Water tupelo ..... *Nyssa aquatica*

Black cherry ..... *Prunus serotina*
Cottonwood ..... *Populus deltoides*
Elm
- Winged elm ..... *Ulmus alata*
- American elm ..... *Ulmus americana*
- Slippery elm ..... *Ulmus rubra*
- Rock elm ..... *Ulmus thomasii*

Hickory
- Pecan ..... *Carya illinoensis*
- Shellbark hickory ..... *Carya laciniosa*
- Shagbark hickory ..... *Carya ovata*
- Mockernut hickory ..... *Carya tomentosa*
- Water hickory ..... *Carya aquatica*
- Bitternut hickory ..... *Carya cordiformis*
- Pignut hickory ..... *Carya glabra*
- Black hickory ..... *Carya texana*

Hard maple
- Black maple ..... *Acer nigrum*
- Sugar maple ..... *Acer saccharum*

Soft maple
- Red maple ..... *Acer rubrum*
- Silver maple ..... *Acer saccharinum*

Red oak
- Cherrybark oak ..... *Quercus falcata* var. *pagodaefolia*
- Northern red oak ..... *Quercus rubra*
- Shumard oak ..... *Quercus shumardi*
- Scarlet oak ..... *Quercus coccinea*
- Southern red oak ..... *Quercus falcata*
- Shingle oak ..... *Quercus imbricaria*
- Blackjack oak ..... *Quercus marilandica*
- Water oak ..... *Quercus nigra*
- Pin oak ..... *Quercus palustris*
- Willow oak ..... *Quercus phellos*

Black oak ..... *Quercus velutina*
White oak
- White oak ..... *Quercus alba*
- Swamp white oak ..... *Quercus bicolor*
- Bur oak ..... *Quercus macrocarpa*
- Swamp chestnut oak ..... *Quercus michauxii*
- Chinkapin oak ..... *Quercus muehlenbergii*
- Overcup oak ..... *Quercus lyrata*
- Post oak ..... *Quercus stellata*

Sweetgum ..... *Liquidambar styraciflua*
American sycamore ..... *Platanus occidentalis*
Black walnut ..... *Juglans nigra*
Yellow-poplar ..... *Liriodendron tulipifera*
Other hardwoods
- Black locust ..... *Robinia pseudoacacia*
- Common persimmon ..... *Diospyros virginiana*
- Flowering dogwood ..... *Cornus florida*
- Honeylocust ..... *Gleditsia triacanthos*
- Red mulberry ..... *Morus rubra*
- Sugarberry ..... *Celtus laevigata*
- Osage-orange ..... *Maclura pomifera*
- Butternut ..... *Juglans cineria*
- Black willow ..... *Salix nigra*
- Boxelder ..... *Acer negundo*
- Cucumbertree ..... *Magnolia acuminita*
- Hackberry ..... *Celtis occidentalis*
- Kentucky coffeetree ..... *Gymnocladus dioicus*
- Ohio buckeye ..... *Aesculus glabra*
- Sassafras ..... *Sassafras albidum*

TABLE TITLES

Table 1.—Number of active primary wood-using plants in Missouri, 1946, 1958, 1969, 1980, and 1987

Table 2.—Industrial roundwood production by product and softwoods and hardwoods in Missouri, 1946, 1958, 1969, 1980, and 1987

Table 3.—Industrial roundwood production by Forest Survey Unit, species group, and product, Missouri, 1987

Table 4.—Charcoal production from roundwood by Forest Survey Unit and species group, Missouri, 1987

Table 5.—Post production from roundwood by Forest Survey Unit and species group, Missouri, 1987

Table 6.—Lumber production by unit for softwoods and hardwoods, Missouri, 1987

Table 7.—Timber removals from growing stock on timberland for industrial roundwood by species group, Forest Survey Unit, and county in Missouri, 1987

Table 8.—Timber removals from sawtimber on timberland for industrial roundwood by species group, Forest Survey Unit, and county in Missouri, 1987

Table 9.—Saw log production by species group in Missouri, 1980 and 1987

Table 10.—Saw log production by species group and destination, Missouri, 1987

Table 11.—Saw log receipts in Missouri by Forest Survey Unit, species group and state of origin, 1987

Table 12.—Veneer production by species group in Missouri, 1980 and 1987

Table 13.—Veneer log production by species and destination, Missouri, 1987

Table 14.—Veneer log receipts in Missouri by species group and area of origin, 1987

Table 15.—Logging residue generated during industrial roundwood production by species group, Forest Survey Unit, and county, Missouri, 1987

Table 16.—Residue produced at primary wood-using mills by type of material, by type of use, and county, Missouri, 1987

Table 1.--Number of active primary wood-using plants in Missouri, 1946, 1958, 1969, 1980, and 1987

Kind of plant	1946	1958	1969	1980	1987
Sawmills					
Large 1/	2	5	7	8	13
Medium 2/	43	103	117	163	169
Small 3/	2,548	882	425	315	228
Total	2,593	990	549	486	410
Cooperage mills	85	36	36	30	20
Veneer mills	6	3	4	4	5
Pulpmills	--	2	2	2	1
Charcoal 4/	3	60	52	36	15
Handle	19	12	7	10	6
Posts	6	14	22	28	23
Miscellaneous 5/	94	44	9	3	11
Total	2,806	1,161	681	599	491

1/ Annual lumber production in excess of 5 million board feet.

2/ Annual lumber production from 1 million to 5 million board feet.

3/ Annual lumber production less than 1 million board feet.

4/ Includes only those charcoal operations using roundwood.

5/ Includes plants producing shavings, chips, rails, etc.

Table 2.-- Industrial roundwood production by product and softwoods and hardwoods in Missouri, 1946, 1958, 1969, 1980, and 1987

(In million cubic feet)

	Softwoods					Hardwoods				
Product	1946	1958	1969	1980	1987	1946	1958	1969	1980	1987
Sawlogs	8.3	4.1	3.3	5.5	7.8	71.1	43.7	63.0	66.2	81.9
Cooperage logs	--	--	--	--	--	14.9	4.5	8.9	4.7	2.0
Veneer logs	--	--	--	--	--	1.4	1.0	1.0	0.7	1.0
Pulpwood	0.1	0.1	--	--	--	0.5	0.7	1.9	1.9	2.2
Charcoal wood	--	--	--	--	--	0.6	3.2	16.7	6.2	2.7
Posts	3.2	0.8	1.2	0.5	0.7	7.8	8.8	1.3	1.2	0.6
Fuelwood 1/	0.2	0.2	0.1	--	--	59.2	61.7	24.4	--	--
Poles	2/	0.2	0.3	--	2/	--	--	2/	--	0.1
Mine timbers	2/	2/	--	--	--	3.4	0.5	0.1	--	--
Handle bolts	--	--	--	--	--	1.3	1.2	0.4	--	0.1
Miscellaneous 3/	2/	2/	0.3	0.2	0.6	2.2	5.7	0.7	0.4	0.2
Total	11.8	5.4	5.2	6.2	9.1	162.4	131.0	118.4	81.3	90.8

1/ Does not include residential fuelwood.

2/ Less than 500 cubic feet.

3/ Includes plants producing shavings, chips, rails, etc.

Table 3.-- Industrial roundwood production by Forest Survey Unit, species group, and product, Missouri, 1987

ALL UNITS

Species group	Saw logs		Veneer logs		Pulpwood		Charcoal		Cooperage		Posts		Other products	All products
	MBF 1/	*MCF 2/*	*MBF 1/*	*MCF 2/*	*Cords 3/*	*MCF 2/*	*Cords 3/*	*MCF 2/*	*MBF 1/*	*MCF 2/*	*Thou. peices*	*MCF 2/*	*MCF 2/*	*MCF 2/*
SOFTWOODS														
Cypress	361	61	--	--	--	--	--	--	--	--	--	--	--	61
Shortleaf pine	37,260	6,470	--	--	--	--	--	--	--	--	753	580	64	7,114
Redcedar	4,555	1,224	--	--	--	--	9	--	--	--	158	120	601	1,945
Total	42,176	7,755	--	--	--	--	9	--	--	--	911	700	665	9,120
HARDWOODS														
Ash	4,999	802	610	138	70	5	125	6	--	--	--	--	22	973
Aspen	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Basswood	324	48	--	--	151	11	--	--	--	--	--	--	--	59
Beech	100	15	--	--	--	--	--	--	--	--	--	--	--	15
Birch	281	44	--	--	--	--	25	1	--	--	--	--	4	49
Tupelo	611	94	--	--	--	--	--	--	--	--	--	--	--	94
Black cherry	302	43	--	--	--	--	34	1	--	--	--	--	--	44
Cottonwood	21,984	3,104	490	112	5,081	395	--	--	--	--	--	--	65	3,676
Elm	1,881	299	--	--	372	29	255	16	--	--	--	--	5	349
Pecan	220	35	52	14	--	--	--	--	--	--	--	--	--	49
Hickory	16,691	2,734	--	--	1,217	93	3,419	230	--	--	29	16	82	3,155
Hard maple	1,818	288	3	1	--	--	100	5	--	--	--	--	--	294
Soft maple	13,560	2,219	--	--	5,038	397	125	6	--	--	--	--	64	2,686
Black oak	110,891	19,731	--	--	1,494	116	13,133	915	--	--	254	135	38	20,935
Red oak	155,630	27,682	124	29	1,402	108	7,235	505	--	--	155	82	5	28,411
White oak	109,790	19,536	2,485	563	1,736	133	14,068	983	12,029	1,982	247	129	52	23,378
Sweegum	2,096	341	--	--	--	--	--	--	--	--	--	--	--	341
Sycamore	10,511	1,698	--	--	1,985	156	397	25	--	--	--	--	12	1,891
Black walnut	12,292	2,676	964	186	82	5	225	13	--	--	--	--	--	2,880
Yellow poplar	1,890	310	--	--	--	--	--	--	--	--	--	--	--	310
Other hardwoods	1,284	205	--	--	9,865	776	--	--	--	--	22	10	22	1,013
Osage-orange	--	--	--	--	--	--	--	--	--	--	364	210	--	210
Total	467,155	81,904	4,728	1,043	28,493	2,224	39,141	2,706	12,029	1,982	1,071	582	371	90,812
All species	509,331	89,659	4,728	1,043	28,493	2,224	39,150	2,706	12,029	1,982	1,982	1,282	1,036	99,932

(Table 3 continued on next page)

(Table 3 continued)

EASTERN OZARK UNIT

Species group	Saw logs		Veneer logs		Pulpwood		Charcoal		Cooperage		Posts		Other products	All products
	MBF 1/	*MCF 2/*	*MBF 1/*	*MCF 2/*	*Cords 3/*	*MCF 2/*	*Cords 3/*	*MCF 2/*	*MBF 1/*	*MCF 2/*	*Thou. peices*	*MCF 2/*	*MCF 2/*	*MCF 2/*
SOFTWOODS														
Cypress	310	53	--	--	--	--	--	--	--	--	--	--	--	53
Shortleaf pine	31,263	5,431	--	--	--	--	--	--	--	--	477	369	60	5,860
Redcedar	297	79	--	--	--	--	9	--	--	--	14	11	--	90
Total	31,870	5,563	--	--	--	--	9	--	--	--	491	380	60	6,003
HARDWOODS														
Ash	334	53	59	13	--	--	25	1	--	--	--	--	--	67
Aspen	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Basswood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beech	18	2	--	--	--	--	--	--	--	--	--	--	--	2
Birch	4	--	--	--	--	--	25	1	--	--	--	--	--	1
Tupelo	439	69	--	--	--	--	--	--	--	--	--	--	--	69
Black cherry	82	12	--	--	--	--	34	1	--	--	--	--	--	13
Cottonwood	813	116	--	--	--	--	--	--	--	--	--	--	--	116
Elm	825	134	--	--	--	--	55	3	--	--	--	--	--	137
Pecan	--	--	18	5	--	--	--	--	--	--	--	--	--	5
Hickory	9,864	1,625	--	--	--	--	440	28	--	--	1	--	62	1,715
Hard maple	1,023	165	--	--	--	--	--	--	--	--	--	--	--	165
Soft maple	716	117	--	--	--	--	25	1	--	--	--	--	--	118
Black oak	68,294	12,161	--	--	--	--	3,966	274	--	--	106	55	34	12,524
Red oak	86,244	15,352	27	6	--	--	971	66	--	--	55	30	--	15,454
White oak	56,183	9,998	780	176	--	--	3,487	243	3,010	495	64	32	41	10,985
Sweegum	1,560	255	--	--	--	--	--	--	--	--	--	--	--	255
Sycamore	1,945	316	--	--	--	--	197	13	--	--	--	--	--	329
Black walnut	97	20	114	24	--	--	25	1	--	--	--	--	--	45
Yellow poplar	84	14	--	--	--	--	--	--	--	--	--	--	--	14
Other hardwods	337	55	--	--	--	--	--	--	--	--	--	--	--	55
Osage-orange	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	228,862	40,464	998	224	--	--	9,250	632	3,010	495	226	117	137	42,069
All species	260,732	46,027	998	224	--	--	9,259	632	3,010	495	717	497	197	48,072

(Table 3 continued on next page)

(Table 3 continued)

SOUTHWEST OZARK UNIT

Species group	Saw logs		Veneer logs		Pulpwood		Charcoal		Cooperage		Posts		Other products	All products
	MBF 1/	*MCF 2/*	*MBF 1/*	*MCF 2/*	*Cords 3/*	*MCF 2/*	*Cords 3/*	*MCF 2/*	*MBF 1/*	*MCF 2/*	*Thou. peices*	*MCF 2/*	*MCF 2/*	*MCF 2/*
SOFTWOODS														
Cypress	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	5,668	983	--	--	--	--	--	--	--	--	220	168	2	1,153
Redcedar	1,836	498	--	--	--	--	--	--	--	--	84	64	74	636
Total	7,504	1,481	--	--	--	--	--	--	--	--	304	232	76	1,789
HARDWOODS														
Ash	334	52	63	15	--	--	--	--	--	--	--	--	7	74
Aspen	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Basswood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beech	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tupelo	63	9	--	--	--	--	--	--	--	--	--	--	--	9
Black cherry	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cottonwood	1	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm	49	7	--	--	--	--	--	--	--	--	--	--	--	7
Pecan	1	--	9	2	--	--	--	--	--	--	--	--	--	2
Hickory	2,273	372	--	--	--	--	1,522	104	--	--	14	8	7	491
Hard maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Soft maple	17	2	--	--	--	--	--	--	--	--	--	--	--	2
Black oak	20,403	3,631	--	--	--	--	4,754	332	--	--	123	70	3	4,036
Red oak	29,544	5,256	19	4	--	--	2,948	207	--	--	91	50	5	5,522
White oak	17,804	3,173	233	54	--	--	4,190	294	152	25	122	66	7	3,619
Sweegum	10	1	--	--	--	--	--	--	--	--	--	--	--	1
Sycamore	1,665	272	--	--	--	--	--	--	--	--	--	--	--	272
Black walnut	3,863	843	99	20	--	--	--	--	--	--	--	--	--	863
Yellow poplar	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Osage-orange	--	--	--	--	--	--	--	--	--	--	3	2	--	2
Total	76,027	13,618	423	95	--	--	13,414	937	152	25	353	196	29	14,900
All species	83,531	15,099	423	95	--	--	13,414	937	152	25	657	428	105	16,689

(Table 3 continued on next page)

(Table 3 continued)

NORTHWEST OZARK UNIT

Species group	Saw logs		Veneer logs		Pulpwood		Charcoal		Cooperage		Posts		Other products	All products
	MBF 1/	*MCF 2/*	*MBF 1/*	*MCF 2/*	*Cords 3/*	*MCF 2/*	*Cords 3/*	*MCF 2/*	*MBF 1/*	*MCF 2/*	*Thou. peices*	*MCF 2/*	*MCF 2/*	*MCF 2/*
SOFTWOODS														
Cypress	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	71	12	--	--	--	--	--	--	--	--	56	43	--	55
Redcedar	926	247	--	--	--	--	--	--	--	--	43	32	415	694
Total	997	259	--	--	--	--	--	--	--	--	99	75	415	749
HARDWOODS														
Ash	397	63	33	7	--	--	100	5	--	--	--	--	--	75
Aspen	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Basswood	4	1	--	--	--	--	--	--	--	--	--	--	--	1
Beech	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Birch	--	--	--	--	--	--	--	--	--	--	--	--	2	2
Tupelo	81	12	--	--	--	--	--	--	--	--	--	--	--	12
Black cherry	58	7	--	--	--	--	--	--	--	--	--	--	--	7
Cottonwood	78	11	--	--	--	--	--	--	--	--	--	--	16	27
Elm	46	8	--	--	--	--	200	13	--	--	--	--	2	23
Pecan	--	--	8	2	--	--	--	--	--	--	--	--	--	2
Hickory	617	101	--	--	--	--	1,347	92	--	--	14	8	9	210
Hard maple	81	14	--	--	--	--	100	5	--	--	--	--	--	19
Soft maple	463	73	--	--	--	--	100	5	--	--	--	--	16	94
Black oak	11,750	2,092	--	--	--	--	4,084	287	--	--	23	10	1	2,390
Red oak	5,730	1,017	12	3	--	--	3,096	217	--	--	6	1	--	1,238
White oak	7,406	1,324	288	65	--	--	5,952	416	1,470	241	54	29	1	2,076
Sweegum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sycamore	1,275	204	--	--	--	--	200	12	--	--	--	--	--	216
Black walnut	554	117	74	14	--	--	200	12	--	--	--	--	--	143
Yellow poplar	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	48	8	--	--	--	--	--	--	--	--	--	--	3	11
Osage-orange	--	--	--	--	--	--	--	--	--	--	39	23	--	23
Total	28,588	5,052	415	91	--	--	15,379	1,064	1,470	241	136	71	50	6,569
All species	29,585	5,311	415	91	--	--	15,379	1,064	1,470	241	235	146	465	7,318

(Table 3 continued on next page)

(Table 3 continued)

PRAIRIE UNIT

Species group	Saw logs		Veneer logs		Pulpwood		Charcoal		Cooperage		Posts		Other products	All products
	MBF 1/	*MCF 2/*	*MBF 1/*	*MCF 2/*	*Cords 3/*	*MCF 2/*	*Cords 3/*	*MCF 2/*	*MBF 1/*	*MCF 2/*	*Thou. peices*	*MCF 2/*	*MCF 2/*	*MCF 2/*
SOFTWOODS														
Cypress	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Redcedar	48	10	--	--	--	--	--	--	--	--	--	--	20	30
Total	48	10	--	--	--	--	--	--	--	--	--	--	20	30
HARDWOODS														
Ash	2,836	453	188	42	70	5	--	--	--	--	--	--	13	513
Aspen	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Basswood	311	46	--	--	151	11	--	--	--	--	--	--	--	57
Beech	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Birch	264	42	--	--	--	--	--	--	--	--	--	--	2	44
Tupelo	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Black cherry	26	4	--	--	--	--	--	--	--	--	--	--	--	4
Cottonwood	11,500	1,623	319	73	3,945	308	--	--	--	--	--	--	44	2,048
Elm	757	119	--	--	372	29	--	--	--	--	--	--	3	151
Pecan	168	28	3	1	--	--	--	--	--	--	--	--	--	29
Hickory	1,849	295	--	--	475	36	--	--	--	--	--	--	3	334
Hard maple	426	66	3	1	--	--	--	--	--	--	--	--	--	67
Soft maple	10,352	1,701	--	--	4,431	348	--	--	--	--	--	--	32	2,081
Black oak	3,598	632	--	--	253	18	--	--	--	--	2	--	--	650
Red oak	16,275	2,881	27	7	395	29	--	--	--	--	3	1	--	2,918
White oak	12,003	2,126	466	106	1,014	77	--	--	2,271	375	7	2	3	2,689
Sweegum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sycamore	3,665	588	--	--	617	48	--	--	--	--	--	--	12	648
Black walnut	6,775	1,478	513	95	82	5	--	--	--	--	--	--	--	1,578
Yellow poplar	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	811	129	--	--	485	37	--	--	--	--	18	9	19	194
Osage-orange	--	--	--	--	--	--	--	--	--	--	315	181	--	181
Total	71,616	12,211	1,519	325	12,290	951	--	--	2,271	375	345	193	131	14,186
All species	71,664	12,221	1,519	325	12,290	951	--	--	2,271	375	345	193	151	14,216

(Table 3 continued on next page)

(Table 3 continued)

RIVERBORDER UNIT

Species group	Saw logs		Veneer logs		Pulpwood		Charcoal		Cooperage		Posts		Other products	All products
	MBF 1/	*MCF 2/*	*MBF 1/*	*MCF 2/*	*Cords 3/*	*MCF 2/*	*Cords 3/*	*MCF 2/*	*MBF 1/*	*MCF 2/*	*Thou. peices*	*MCF 2/*	*MCF 2/*	*MCF 2/*
SOFTWOODS														
Cypress	51	8	--	--	--	--	--	--	--	--	--	--	--	8
Shortleaf pine	258	44	--	--	--	--	--	--	--	--	--	--	2	46
Redcedar	1,448	390	--	--	--	--	--	--	--	--	17	13	92	495
Total	1,757	442	--	--	--	--	--	--	--	--	17	13	94	549
HARDWOODS														
Ash	1,098	181	267	61	--	--	--	--	--	--	--	--	2	244
Aspen	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Basswood	9	1	--	--	--	--	--	--	--	--	--	--	--	1
Beech	82	13	--	--	--	--	--	--	--	--	--	--	--	13
Birch	13	2	--	--	--	--	--	--	--	--	--	--	--	2
Tupelo	28	4	--	--	--	--	--	--	--	--	--	--	--	4
Black cherry	136	20	--	--	--	--	--	--	--	--	--	--	--	20
Cottonwood	9,592	1,354	171	39	1,136	87	--	--	--	--	--	--	5	1,485
Elm	204	31	--	--	--	--	--	--	--	--	--	--	--	31
Pecan	51	7	14	4	--	--	--	--	--	--	--	--	--	11
Hickory	2,088	341	--	--	742	57	110	6	--	--	--	--	1	405
Hard maple	288	43	--	--	--	--	--	--	--	--	--	--	--	43
Soft maple	2,012	326	--	--	607	49	--	--	--	--	--	--	16	391
Black oak	6,846	1,215	--	--	1,241	98	329	22	--	--	--	--	--	1,335
Red oak	17,837	3,176	39	9	1,007	79	220	15	--	--	--	--	--	3,279
White oak	16,394	2,915	718	162	722	56	439	30	5,126	846	--	--	--	4,009
Sweegum	526	85	--	--	--	--	--	--	--	--	--	--	--	85
Sycamore	1,961	318	--	--	1,368	108	--	--	--	--	--	--	--	426
Black walnut	1,003	218	164	33	--	--	--	--	--	--	--	--	--	251
Yellow poplar	1,806	296	--	--	--	--	--	--	--	--	--	--	--	296
Other hardwoods	88	13	--	--	9,380	739	--	--	--	--	4	1	--	753
Osage-orange	--	--	--	--	--	--	--	--	--	--	7	4	--	4
Total	62,062	10,559	1,373	308	16,203	1,273	1,098	73	5,126	846	11	5	24	13,088
All species	63,819	11,001	1,373	308	16,203	1,273	1,098	73	5,126	846	28	18	118	13,637

1/ Thousand board feet, International 1/4-inch rule.

2/ Thousand cubic feet.

3/ Standard cords comprising 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

Table 4.-- Charcoal production from roundwood by Forest Survey Unit and species group, Missouri, 1987

(In thousand cubic feet)

Species group	All Units	Forest Survey Unit: Eastern Ozarks	Southwest Ozarks	Northwest Ozarks	Prairie	River-border
Ash	6	1	--	5	--	--
Birch	1	1	--	--	--	--
Black cherry	1	1	--	--	--	--
Elm	16	3	--	13	--	--
Hickory	230	28	104	92	--	6
Hard maple	5	--	--	5	--	--
Soft maple	6	1	--	5	--	--
Black ak	915	274	332	287	--	22
Red oak	505	66	207	217	--	15
White oak	983	243	294	416	--	30
Sycamore	25	13	--	12	--	--
Black walnt	13	1	--	12	--	--
All species	2,706	632	937	1,064	--	73

Table 5.-- Post production from roundwood by Forest Survey Unit and species group, Missouri, 1987

(In thousand pieces)

Species group	All Units	Forest Survey Unit: Eastern Ozarks	Southwest Ozarks	Northwest Ozarks	Prairie	River-border
Shortleaf pine	753	477	220	56	--	--
Redcedar	158	14	84	43	--	17
Hickory	29	1	14	14	--	--
Black oak	254	106	123	23	2	--
Red oak	155	55	91	6	3	--
White oak	247	64	122	54	7	--
Other hardwoods	22	--	--	--	18	4
Osage-orange	364	--	3	39	315	7
All species	1,982	717	657	235	345	28

Table 6.--Lumber production by unit for softwoods and hardwoods, Missouri, 1987

(In thousand board feet) 1/

Species group	All Units	Forest Survey Unit: Eastern Ozarks	Southwest Ozarks	Northwest Ozarks	Prairie	River-border
Softwoods	42,428	31,159	8,811	966	35	1,457
Hardwoods	498,704	230,599	77,939	27,714	78,375	84,077
All species	541,132	261,758	86,750	28,680	78,410	85,534

1/ International 1/4-inch rule.

Table 7.-- Timber removals from growing stock on timberland for industrial roundwood by species group, Forest Survey Unit, and county in Missouri, 1987

(In thousand cubic feet)

Unit and County	Cypress	Shortleaf pine	Red-cedar	Ash	Bass-wood	Beech	Birch	Tupelo	Black cherry	Cotton-wood	Elm	Pecan	Other hickory
EASTERN OZARK UNIT													
Bollinger	--	77	--	13	--	3	--	15	1	16	34	1	222
Butler	2	218	--	8	--	--	--	15	--	16	39	--	52
Carter	17	922	--	1	--	--	--	3	--	13	--	--	202
Crawford	--	119	4	2	--	--	--	--	--	22	4	--	51
Dent	--	386	6	1	--	--	--	--	1	--	7	1	36
Iron	--	297	13	2	--	--	--	1	--	--	1	--	56
Madison	--	441	11	5	--	--	--	1	1	--	1	--	82
Oregon	6	275	--	1	--	--	--	--	--	--	--	--	242
Reynolds	--	720	20	1	--	--	--	--	--	--	4	1	187
Ripley	--	291	--	17	--	--	--	13	6	8	46	--	242
St Francois	--	--	2	--	--	--	--	--	--	--	--	1	4
Shannon	34	1,238	--	14	--	--	--	24	4	--	--	--	259
Washington	--	521	19	2	--	--	--	--	--	35	6	1	20
Wayne	--	769	--	5	--	--	--	7	--	12	8	--	223
Total	59	6,274	75	72	--	3	--	79	13	122	150	5	1,878
SOUTHWEST OZARK UNIT													
Barry	--	--	95	25	--	--	--	--	--	--	4	1	19
Christian	--	--	38	5	--	--	--	--	--	--	--	--	--
Douglas	--	72	--	4	--	--	--	--	--	--	--	--	38
Howell	--	302	6	2	--	--	--	3	--	--	--	--	148
Mcdonald	--	2	--	1	--	--	--	--	--	--	--	--	33
Newton	--	--	--	1	--	--	--	--	--	--	--	--	28
Ozark	--	26	89	3	--	--	--	--	--	--	1	1	39
Stone	--	--	20	16	--	--	--	--	--	--	--	--	--
Taney	--	21	301	1	--	--	--	1	--	--	--	--	3
Texas	--	768	13	8	--	--	--	7	--	--	3	--	127
Webster	--	--	--	17	--	--	--	--	--	--	--	--	3
Wright	--	6	--	4	--	--	--	--	--	--	--	--	21
Total	--	1,197	562	87	--	--	--	11	--	--	8	2	459
NORTHWEST OZARK UNIT													
Benton	--	--	45	2	--	--	2	--	--	9	1	--	17
Camden	--	--	145	5	--	--	--	--	--	9	1	1	12
Cedar	--	--	--	6	--	--	--	--	--	--	--	--	--
Dallas	--	--	6	--	--	--	--	--	--	--	--	--	--
Hickory	--	--	139	--	--	--	--	--	--	--	--	--	3
Laclede	--	--	29	5	--	--	--	--	7	--	2	--	4
Maries	--	30	56	5	--	--	--	--	--	--	--	--	29
Miller	--	--	143	16	--	--	--	--	--	--	2	1	8
Morgan	--	--	73	4	1	--	--	--	--	--	1	--	3
Phelps	--	8	22	4	--	--	--	12	--	--	4	--	56
Polk	--	--	3	3	--	--	--	--	--	--	--	--	4
Pulaski	--	6	32	24	--	--	--	3	1	--	5	--	21
St Clair	--	--	1	7	--	--	--	--	--	12	--	--	--
Total	--	44	694	81	1	--	2	15	8	30	16	2	157
PRAIRIE UNIT													
Adair	--	--	--	5	1	--	1	--	--	10	--	--	5
Andrew	--	--	--	1	2	--	--	--	--	9	1	--	3
Atchison	--	--	--	--	--	--	--	--	--	13	--	--	--
Audrain	--	--	--	27	--	--	7	--	--	44	12	--	47
Barton	--	--	--	42	--	--	--	--	--	2	15	--	26
Bates	--	--	--	62	--	--	--	--	--	2	31	--	3
Buchanan	--	--	--	3	4	--	--	--	--	45	--	--	7
Caldwell	--	--	--	3	--	--	--	--	--	6	--	--	--
Carroll	--	--	--	4	--	--	--	--	--	83	--	--	7
Cass	--	--	--	1	--	--	--	--	--	4	--	--	--
Charlton	--	--	--	6	--	--	--	--	--	41	1	--	--
Clark	--	--	1	17	6	--	7	--	--	378	19	--	40
Clay	--	--	--	3	--	--	--	--	--	6	--	--	--
Clinton	--	--	--	1	--	--	--	--	--	42	--	--	1
Cooper	--	--	21	4	1	--	--	--	--	16	--	--	3

(Table 7 continued on next page)

(Table 7 continued)

Unit and County	Cypress	Shortleaf pine	Red-cedar	Ash	Bass-wood	Beech	Birch	Tupelo	Black cherry	Cotton-wood	Elm	Pecan	Other hickory
PRAIRIE UNIT *(continued)*													
Dade	--	--	--	2	--	--	--	--	--	1	1	--	3
Daviess	--	--	--	4	12	--	--	--	--	47	3	--	4
De Kalb	--	--	--	4	3	--	--	--	--	13	3	--	3
Gentry	--	--	--	8	8	--	--	--	3	41	8	--	8
Greene	--	--	1	4	--	--	--	--	--	--	--	--	1
Grundy	--	--	--	23	6	--	--	--	--	77	--	--	--
Harrison	--	--	--	9	8	--	--	--	--	35	3	--	5
Henry	--	--	4	18	--	--	--	--	--	20	9	--	13
Holt	--	--	--	--	--	--	--	--	--	225	--	--	--
Jackson	--	--	--	--	--	--	--	--	--	7	--	--	--
Jasper	--	--	--	37	--	--	--	--	--	3	15	--	24
Johnson	--	--	--	2	--	--	4	--	--	12	5	--	--
Knox	--	--	1	16	1	--	5	--	--	42	--	--	16
Lafayette	--	--	--	1	--	--	2	--	--	27	--	--	--
Lawrence	--	--	--	2	--	--	--	--	--	1	--	--	--
Lewis	--	--	1	4	2	--	1	--	--	92	4	--	10
Lincoln	--	--	--	17	--	--	--	--	--	1	--	2	3
Linn	--	--	--	20	--	--	--	--	--	127	--	--	1
Livingston	--	--	--	24	1	--	--	--	--	137	1	--	1
Macon	--	--	--	5	1	--	3	--	--	20	--	--	15
Marion	--	--	1	8	--	--	4	--	--	53	3	--	5
Mercer	--	--	--	--	--	--	--	--	--	4	--	--	--
Monroe	--	--	--	37	--	--	7	--	--	50	12	--	20
Nodaway	--	--	--	1	1	--	--	--	--	26	1	--	1
Pettis	--	--	--	3	--	--	4	--	--	19	1	--	4
Pike	--	--	--	17	--	--	--	--	--	56	1	--	8
Platte	--	--	--	4	--	--	--	--	--	5	--	--	1
Putnam	--	--	--	1	--	--	--	--	--	--	--	--	--
Ralls	--	--	--	20	--	--	--	--	1	42	1	1	4
Randolph	--	--	--	13	--	--	--	--	--	6	1	--	23
Ray	--	--	--	1	--	--	--	--	--	7	--	--	--
Saline	--	--	--	7	--	--	--	--	--	32	1	--	1
Schuyler	--	--	--	--	--	--	--	--	--	13	--	--	1
Scotland	--	--	--	6	--	--	1	--	1	100	--	--	17
Shelby	--	--	--	16	--	--	3	--	--	19	2	--	17
Sullivan	--	--	--	1	--	--	--	--	--	7	--	--	--
Vernon	--	--	--	54	--	--	--	--	--	--	4	28	5
Worth	--	--	--	3	3	--	--	--	--	12	3	--	3
Total	--	--	30	571	60	--	49	--	5	2,080	161	31	359
RIVERBORDER UNIT													
Boone	--	--	--	11	--	--	--	--	--	23	--	1	4
Callaway	--	--	136	10	--	--	--	--	--	49	6	--	6
Cape Girardeau	--	--	--	62	--	12	--	--	7	304	5	--	169
Cole	--	--	63	3	--	--	--	--	--	--	--	--	--
Dunklin	--	--	--	2	--	--	1	--	--	9	5	--	8
Franklin	--	--	103	8	--	--	--	--	--	229	--	1	7
Gasconade	--	--	--	9	--	--	--	--	--	71	--	--	1
Howard	--	--	--	7	--	--	--	--	--	62	2	--	2
Jefferson	--	6	29	9	--	--	--	--	--	25	--	--	--
Mississippi	--	--	--	1	--	--	--	--	--	128	--	1	22
Moniteau	--	--	--	3	--	--	--	--	--	--	--	--	--
Montgomery	--	--	68	3	--	--	--	--	--	53	--	--	5
New Madrid	--	--	--	1	--	--	--	--	--	162	--	--	18
Osage	--	2	38	28	--	--	--	--	--	13	1	1	6
Pemiscot	--	--	--	1	--	--	--	--	--	42	--	--	--
Perry	--	--	--	56	--	3	--	--	13	147	4	--	76
St Charles	--	--	--	10	1	--	--	--	1	13	1	2	3
St Louis	--	--	10	2	--	--	--	--	--	36	--	--	--
St Genevieve	--	43	7	4	--	--	--	3	--	109	3	1	6
Scott	--	--	--	13	--	--	--	1	--	12	--	--	10
Stoddard	9	--	--	5	--	--	1	1	1	9	5	4	69
Warren	--	--	--	12	--	--	--	--	--	62	3	1	4
Total	9	51	454	260	1	15	2	5	22	1,558	35	12	416
State total	68	7,566	1,815	1,071	62	18	53	110	48	3,790	370	52	3,269

(Table 7 continued on next page)

(Table 7 continued)

Unit and county	Hard maple	Soft maple	Black oak	Red oak	White oak	Sweet-gum	Syca-more	Black walnut	Yellow-poplar	Other hard-woods	All species
EASTERN OZARK UNIT											
Bollinger	85	46	688	1,246	955	2	22	1	16	--	3,443
Butler	17	4	155	521	280	36	5	--	--	1	1,369
Carter	--	4	661	1,195	599	2	3	1	--	--	3,623
Crawford	--	19	1,160	645	1,057	--	28	1	--	--	3,112
Dent	2	--	1,941	698	1,102	86	39	8	--	--	4,314
Iron	4	--	947	877	674	4	24	1	--	--	2,901
Madison	15	--	363	1,080	360	13	53	2	--	--	2,428
Oregon	--	--	370	1,724	853	5	43	1	--	--	3,520
Reynolds	3	--	2,020	2,232	1,491	4	12	2	--	--	6,697
Ripley	42	7	570	1,808	1,024	109	69	1	--	8	4,261
St Francois	4	--	122	82	97	--	10	--	--	--	322
Shannon	4	1	1,279	1,750	1,267	8	14	2	--	50	5,948
Washington	--	33	1,257	507	527	--	7	1	--	--	2,936
Wayne	8	15	1,421	1,837	1,137	8	24	1	--	--	5,475
Total	184	129	12,954	16,202	11,423	277	353	22	16	59	50,349
SOUTHWEST OZARK UNIT											
Barry	--	--	159	403	282	--	78	40	--	--	1,106
Christian	--	--	33	155	52	--	4	1	--	--	288
Douglas	--	--	1,140	554	486	--	26	124	--	--	2,444
Howell	--	--	291	1,141	727	--	12	37	--	--	2,669
Mcdonald	--	--	58	781	200	--	35	40	--	--	1,150
Newton	--	--	25	833	209	--	31	9	--	--	1,136
Ozark	--	--	18	295	65	--	15	19	--	--	571
Stone	--	--	7	156	51	--	10	1	--	--	261
Taney	--	--	64	23	38	--	1	1	--	--	454
Texas	--	3	1,400	847	929	1	13	70	--	--	4,189
Webster	--	--	104	199	170	--	26	3	--	--	522
Wright	--	--	681	256	363	--	48	66	--	--	1,445
Total	--	3	3,980	5,643	3,572	1	299	411	--	--	16,235
NORTHWEST OZARK UNIT											
Benton	1	21	17	22	42	--	3	2	--	1	185
Camden	4	2	76	69	119	--	16	3	--	2	464
Cedar	--	19	--	47	51	--	--	1	--	--	124
Dallas	--	--	58	27	56	--	8	--	--	--	155
Hickory	1	1	4	5	7	--	1	--	--	--	161
Laclede	5	6	270	132	331	--	18	8	--	--	817
Maries	--	8	202	146	245	--	16	5	--	--	742
Miller	1	16	126	116	188	--	5	3	--	--	625
Morgan	1	12	62	44	84	--	16	1	--	--	302
Phelps	--	8	493	250	374	--	46	1	--	--	1,278
Polk	1	1	78	10	72	--	16	37	--	--	225
Pulaski	1	2	880	267	309	--	85	5	--	--	1,641
St Clair	--	6	33	10	10	--	--	1	--	8	88
Total	15	102	2,299	1,145	1,888	--	230	67	--	11	6,807
PRAIRIE UNIT											
Adair	--	20	1	41	30	--	12	1	--	1	128
Andrew	--	4	--	4	40	--	3	11	--	--	78
Atchison	--	3	--	1	1	--	--	1	--	--	19
Audrain	30	69	65	197	141	--	75	10	--	19	743
Barton	--	53	--	146	84	--	--	2	--	--	370
Bates	--	59	28	79	81	--	64	59	--	27	495
Buchanan	--	8	--	94	60	--	26	35	--	6	288
Caldwell	--	48	--	1	12	--	1	27	--	--	98
Carroll	4	50	--	15	37	--	--	19	--	1	220
Cass	--	4	5	--	24	--	4	42	--	--	84
Charlton	--	96	18	26	14	--	--	4	--	--	206
Clark	--	212	55	205	151	--	31	8	--	13	1,141
Clay	--	4	--	1	1	--	--	19	--	--	34
Clinton	--	8	--	15	24	--	23	25	--	1	140
Cooper	--	66	10	105	153	--	43	33	--	5	460

(Table 7 continued on next page)

(Table 7 continued)

Unit and county	Hard maple	Soft maple	Black oak	Red oak	White oak	Sweet-gum	Syca-more	Black walnut	Yellow-poplar	Other hard-woods	All species
PRAIRIE UNIT *(continued)*											
Dade	--	13	--	96	70	--	1	104	--	--	291
Daviess	2	3	--	10	68	--	6	6	--	--	165
De Kalb	--	3	--	3	40	--	--	14	--	--	86
Gentry	--	3	--	10	100	--	--	1	--	--	190
Greene	--	--	45	36	43	--	12	2	--	--	144
Grundy	--	115	--	17	24	--	6	2	--	1	271
Harrison	--	19	--	13	67	--	3	7	--	--	169
Henry	--	167	105	25	61	--	38	39	--	21	520
Holt	--	4	--	1	10	--	--	15	--	--	255
Jackson	--	--	--	1	10	--	--	9	--	--	27
Jasper	--	31	1	111	23	--	1	7	--	--	253
Johnson	--	--	25	--	56	--	11	56	--	3	174
Knox	--	54	7	114	81	--	30	3	--	3	373
Lafayette	--	12	--	3	14	--	2	40	--	6	107
Lawrence	--	1	--	162	125	--	22	4	--	--	317
Lewis	--	58	20	82	73	--	16	2	--	3	368
Lincoln	1	13	3	100	70	--	4	8	--	4	226
Linn	--	125	--	9	8	--	3	3	--	1	297
Livingston	--	272	--	82	30	--	3	8	--	1	560
Macon	3	31	5	85	45	--	23	2	--	1	239
Marion	--	25	15	107	94	--	21	7	--	3	346
Mercer	--	3	--	2	6	--	--	1	--	--	16
Monroe	19	69	107	206	171	--	50	11	--	21	780
Nodaway	--	4	--	4	13	--	--	1	--	--	52
Pettis	--	21	25	4	28	--	14	1	--	5	129
Pike	3	39	7	152	176	--	40	7	--	10	516
Platte	--	5	--	3	11	--	3	8	--	--	40
Putnam	--	3	--	7	6	--	1	3	--	3	24
Ralls	2	43	6	189	154	--	20	17	--	18	518
Randolph	6	41	54	175	61	--	27	1	--	9	417
Ray	--	5	--	2	24	--	--	45	--	--	84
Saline	--	86	2	11	10	--	12	3	--	9	174
Schuyler	--	4	--	4	12	--	1	1	--	1	37
Scotland	--	29	21	98	81	--	16	3	--	--	373
Shelby	7	59	54	156	63	--	23	1	--	--	420
Sullivan	--	7	--	5	4	--	1	2	--	--	27
Vernon	--	62	--	53	37	--	4	7	--	2	256
Worth	--	1	--	3	25	--	--	1	--	--	54
Total	77	2,134	684	3,071	2,847	--	696	746	--	198	13,799
RIVERBORDER UNIT											
Boone	--	19	28	100	144	--	29	24	--	5	388
Callaway	--	5	73	87	366	--	42	3	--	3	786
Cape Girardeau	18	19	370	822	693	1	34	8	245	4	2,773
Cole	--	1	9	9	74	--	--	1	--	--	160
Dunklin	4	3	5	57	17	20	3	--	--	--	134
Franklin	--	59	68	49	191	--	8	2	--	--	725
Gasconade	1	40	99	133	183	--	24	1	--	--	562
Howard	--	93	4	85	88	--	122	31	--	13	509
Jefferson	--	20	37	54	209	--	--	2	--	--	391
Mississippi	--	15	39	40	31	3	--	--	--	273	553
Moniteau	--	1	11	41	39	--	1	10	--	--	106
Montgomery	1	6	14	28	129	--	21	1	--	--	329
New Madrid	--	13	30	36	17	45	--	--	--	227	549
Osage	--	17	177	195	306	--	74	3	--	--	861
Pemiscot	--	--	--	--	--	--	--	--	--	--	43
Perry	8	--	21	433	484	4	--	11	58	--	1,318
St Charles	3	23	26	88	118	--	1	9	--	3	302
St Louis	--	28	28	28	63	--	--	1	--	--	196
St Genevieve	6	10	259	290	204	--	6	1	--	--	952
Scott	7	--	--	118	81	--	--	--	18	1	261
Stoddard	1	3	--	555	281	22	28	1	3	--	998
Warren	1	36	62	164	548	--	31	10	--	4	938
Total	50	411	1,360	3,412	4,266	95	424	119	324	533	13,834
State total	326	2,779	21,277	29,473	23,996	373	2,002	1,365	340	801	101,024

Table 8.-- Timber removals from sawtimber on timberland for industrial roundwood by species group, Forest Survey Unit, and county in Missouri, 1987

(In thousand board feet) 1/

Unit and County	Cypress	Shortleaf pine	Red-cedar	Ash	Bass-wood	Beech	Birch	Tupelo	Black cherry	Cotton-wood	Elm	Pecan	Other hickory
EASTERN OZARK UNIT													
Bollinger	–	395	–	47	–	12	2	57	5	96	129	4	858
Butler	10	1,075	–	33	–	–	–	54	–	94	150	–	197
Carter	88	4,510	–	3	–	–	–	11	–	77	2	–	777
Crawford	–	614	5	13	–	–	1	–	1	127	9	–	211
Dent	–	1,894	7	3	–	–	–	–	7	–	26	4	125
Iron	–	1,525	11	7	–	–	–	5	–	–	3	–	214
Madison	–	2,266	13	21	–	–	–	3	4	–	6	–	314
Oregon	30	1,358	–	4	–	–	–	–	–	–	–	–	933
Reynolds	–	3,659	23	7	–	–	–	1	–	–	16	3	720
Ripley	–	1,498	–	63	–	–	–	51	24	45	177	–	932
St Francois	–	2	2	2	–	–	–	1	–	–	–	3	14
Shannon	177	5,584	–	55	–	–	–	93	18	–	–	–	993
Washington	–	2,585	21	12	–	–	–	–	–	207	23	4	77
Wayne	–	3,951	–	22	–	–	1	28	–	66	32	–	854
Total	305	30,916	82	292	–	12	4	304	59	712	573	18	7,219
SOUTHWEST OZARK UNIT													
Barry	–	–	240	96	–	–	–	–	–	–	16	4	77
Christian	–	–	35	18	–	–	–	–	–	–	–	–	–
Douglas	–	365	–	18	–	–	–	–	–	–	–	–	146
Howell	–	1,390	3	8	–	–	–	12	–	–	1	–	565
Mcdonald	–	11	–	6	–	–	–	–	–	–	2	–	128
Newton	–	–	–	6	–	–	–	–	–	1	1	1	113
Ozark	–	137	170	12	–	–	–	–	–	–	3	5	143
Stone	–	–	22	58	–	–	–	–	–	–	–	–	1
Taney	–	110	463	5	–	–	–	3	–	–	–	–	9
Texas	–	3,589	8	33	–	–	–	28	–	–	11	–	417
Webster	–	–	–	64	–	–	–	–	–	–	–	–	11
Wright	–	29	–	15	–	–	–	–	–	–	–	–	72
Total	–	5,631	941	339	–	–	–	43	–	1	34	10	1,682
NORTHWEST OZARK UNIT													
Benton	–	–	144	6	–	–	12	–	–	47	5	–	69
Camden	–	–	613	17	–	–	–	–	2	47	6	4	47
Cedar	–	–	–	26	–	–	–	–	–	–	–	–	–
Dallas	–	–	7	3	–	–	–	–	2	–	–	–	–
Hickory	–	–	694	3	–	–	–	–	–	–	–	–	15
Laclede	–	–	32	19	–	–	–	–	28	–	5	–	8
Maries	–	18	66	24	–	–	–	1	1	–	–	–	67
Miller	–	–	698	57	–	–	–	–	–	–	2	4	15
Morgan	–	–	362	18	3	–	–	–	1	3	3	–	9
Phelps	–	40	14	13	–	–	–	43	1	–	17	–	220
Polk	–	–	3	10	–	–	–	–	–	–	–	–	15
Pulaski	–	30	38	88	–	–	–	11	5	–	10	–	77
St Clair	–	–	1	27	–	–	–	–	–	66	–	–	–
Total	–	88	2,672	311	3	–	12	55	40	163	48	8	542
PRAIRIE UNIT													
Adair	–	–	–	21	3	–	5	–	–	59	–	–	21
Andrew	–	–	–	8	7	–	–	–	–	57	7	–	10
Atchison	–	–	–	2	–	–	–	–	–	77	–	–	–
Audrain	–	–	–	102	–	–	28	–	–	257	43	–	182
Barton	–	–	–	164	–	–	–	–	–	13	53	–	102
Bates	–	–	–	238	–	–	–	–	–	12	123	–	11
Buchanan	–	–	–	12	18	–	–	–	–	259	–	–	26
Caldwell	–	–	–	11	–	–	–	–	–	30	–	–	–
Carroll	–	–	–	12	–	–	–	–	–	485	–	–	25
Cass	–	–	–	3	–	–	–	–	–	22	–	–	–
Chariton	–	–	–	26	1	–	–	–	–	227	5	–	1
Clark	–	–	2	64	27	–	25	–	–	1,956	76	–	163
Clay	–	–	–	12	–	–	–	–	–	30	–	–	–
Clinton	–	–	–	3	2	–	–	–	–	244	–	–	4
Cooper	–	–	116	15	5	–	–	–	–	69	1	–	9

(Table 8 continued on next page)

(Table 8 continued)

Unit and County	Cypress	Shortleaf pine	Red-cedar	Ash	Bass-wood	Beech	Birch	Tupelo	Black cherry	Cotton-wood	Elm	Pecan	Other hickory
PRAIRIE UNIT *(continued)*													
Dade	–	–	–	8	–	–	–	–	–	5	5	–	9
Daviess	–	–	–	21	43	–	–	–	–	246	8	–	17
De Kalb	–	–	–	15	8	–	–	–	–	73	8	–	9
Gentry	–	–	–	36	35	–	–	–	9	238	34	–	35
Greene	–	–	1	18	–	–	–	–	–	–	–	–	5
Grundy	–	–	–	91	24	–	–	–	–	447	–	–	–
Harrison	–	–	–	38	34	–	–	–	–	205	10	–	21
Henry	–	–	5	73	–	–	–	–	–	116	36	–	49
Holt	–	–	–	2	–	–	–	–	–	1,300	–	–	1
Jackson	–	–	–	2	–	–	–	–	–	39	–	–	–
Jasper	–	–	–	141	–	–	–	–	–	18	54	–	96
Johnson	–	–	–	10	–	–	15	–	–	70	20	–	–
Knox	–	–	1	57	7	–	20	–	–	237	2	–	62
Lafayette	–	–	–	3	1	–	12	–	–	144	2	–	1
Lawrence	–	–	–	9	–	–	–	–	–	5	–	–	1
Lewis	–	–	1	18	8	–	5	–	–	470	19	–	41
Lincoln	–	–	–	67	–	–	–	–	2	10	–	6	10
Linn	–	–	–	72	1	–	1	–	1	623	–	–	4
Livingston	–	–	–	93	5	–	–	–	–	789	5	–	4
Macon	–	–	–	23	3	–	10	–	–	119	–	–	53
Marion	–	–	2	31	1	–	16	–	–	307	9	–	23
Mercer	–	–	–	2	–	–	–	–	–	22	–	–	–
Monroe	–	–	–	142	–	–	28	–	–	296	43	–	78
Nodaway	–	–	–	7	4	–	–	–	–	148	5	–	4
Pettis	–	–	–	17	2	–	15	–	–	105	5	–	16
Pike	–	–	–	64	–	–	–	–	–	329	4	–	35
Platte	–	–	–	13	1	–	–	–	–	26	–	–	3
Putnam	–	–	–	3	–	–	–	–	–	–	–	–	–
Ralls	–	–	–	77	–	–	–	–	3	247	3	5	15
Randolph	–	–	–	47	–	–	–	–	–	32	7	–	87
Ray	–	–	–	3	–	–	–	–	–	40	–	–	–
Saline	–	–	–	31	1	–	–	–	–	185	3	–	6
Schuyler	–	–	–	2	–	–	–	–	–	71	–	–	4
Scotland	–	–	–	27	–	–	7	–	3	572	2	–	68
Shelby	–	–	–	59	1	–	8	–	–	108	7	–	67
Sullivan	–	–	–	4	–	–	–	–	–	38	1	–	1
Vernon	–	–	–	212	–	–	–	–	–	3	14	108	22
Worth	–	–	–	9	8	–	–	–	–	69	8	–	8
Unit Total	–	–	128	2,240	250	–	195	–	18	11,549	622	119	1,409
RIVERBORDER UNIT													
Boone	–	–	–	44	–	–	–	–	1	105	1	4	16
Callaway	–	–	149	41	–	–	–	–	–	285	24	–	24
Cape Girardeau	–	–	–	239	–	46	–	–	28	1,754	21	–	652
Cole	–	–	337	13	–	–	–	–	–	–	–	–	–
Dunklin	1	–	–	7	–	–	5	2	1	54	21	2	31
Franklin	–	–	113	29	–	–	–	–	–	1,328	–	3	28
Gasconade	–	1	1	39	–	–	–	–	1	417	–	–	5
Howard	–	–	–	28	1	–	–	–	–	300	7	–	7
Jefferson	–	30	28	41	–	–	–	–	1	143	–	–	–
Mississippi	–	–	–	7	–	–	–	–	–	738	–	5	98
Moniteau	–	–	–	12	–	–	–	–	–	–	–	–	–
Montgomery	–	–	76	13	–	–	–	–	–	309	–	–	22
New Madrid	–	–	–	6	–	–	–	–	–	935	–	–	76
Osage	–	12	198	113	–	–	–	–	–	75	3	3	19
Pemiscot	–	–	–	5	–	–	–	–	–	171	–	–	–
Perry	–	–	1	217	–	9	–	–	47	849	18	–	294
St Charles	–	–	–	39	5	–	–	–	6	76	4	7	8
St Louis	–	–	11	11	1	–	–	–	2	209	2	1	2
St Genevieve	–	222	7	18	–	–	–	8	–	624	9	4	24
Scott	–	–	–	49	–	–	–	5	–	67	–	–	41
Stoddard	49	–	–	17	–	1	3	4	5	54	20	18	266
Warren	–	–	–	51	–	–	–	–	2	363	11	3	15
Total	50	265	921	1,039	7	56	8	19	94	8,856	141	50	1,628
State total	355	36,900	4,744	4,221	260	68	219	421	211	21,281	1,418	205	12,480

(Table 8 continued on next page)

(Table 8 continued)

Unit and county	Hard maple	Soft maple	Black oak	Red oak	White oak	Sweet-gum	Syca-more	Black walnut	Yellow-poplar	Other hard-woods	All species
EASTERN OZARK UNIT											
Bollinger	325	176	2,519	4,557	3,536	7	84	5	58	--	12,872
Butler	64	19	566	1,902	1,027	139	20	2	--	4	5,356
Carter	--	18	2,415	4,374	2,246	7	11	3	--	--	14,542
Crawford	1	74	4,283	2,353	4,051	1	105	5	--	--	11,854
Dent	7	--	7,022	2,522	4,086	331	143	33	--	--	16,210
Iron	14	--	3,464	3,207	2,472	18	93	5	--	--	11,038
Madison	56	--	1,329	3,949	1,355	52	205	7	--	--	9,580
Oregon	--	--	1,355	6,309	3,124	21	165	5	--	--	13,304
Reynolds	14	--	7,371	8,167	5,521	18	43	9	--	--	25,570
Ripley	158	25	2,085	6,618	3,751	421	266	3	--	34	16,149
St Francois	16	--	444	300	383	--	40	2	--	--	1,209
Shannon	18	5	4,629	8,388	4,882	33	54	10	--	194	23,133
Washington	2	127	4,600	1,859	2,004	2	28	5	--	--	11,556
Wayne	31	53	5,193	6,720	4,205	30	95	5	--	--	21,286
Total	706	497	47,275	59,223	42,643	1,078	1,352	99	58	232	193,659
SOUTHWEST OZARK UNIT											
Barry	--	--	584	1,480	1,037	--	299	182	--	--	4,015
Christian	--	--	114	567	192	--	17	6	--	--	949
Douglas	--	--	4,160	2,022	1,769	--	100	558	--	--	9,138
Howell	--	--	1,025	4,166	2,641	--	44	187	--	--	10,022
Mcdonald	--	--	211	2,856	734	--	135	180	--	--	4,263
Newton	--	2	89	3,050	768	--	124	45	--	--	4,200
Ozark	--	--	63	1,078	240	--	55	86	--	--	1,992
Stone	--	--	32	570	190	--	38	4	--	--	915
Taney	--	--	234	84	142	--	3	5	--	--	1,058
Texas	--	9	4,933	2,940	3,225	7	52	312	--	--	15,564
Webster	--	--	371	727	628	--	98	18	--	--	1,917
Wright	--	--	2,480	932	1,340	--	186	298	--	--	5,352
Total	--	11	14,296	20,472	12,906	7	1,151	1,861	--	--	59,385
NORTHWEST OZARK UNIT											
Benton	3	102	63	78	158	--	12	8	--	5	710
Camden	16	7	277	253	473	--	60	13	--	12	1,847
Cedar	--	74	2	174	188	--	--	7	--	--	471
Dallas	--	--	209	96	221	--	35	3	--	--	576
Hickory	4	3	16	17	31	--	4	4	--	--	791
Laclede	21	25	965	460	1,332	--	69	29	--	--	2,993
Maries	--	31	612	450	770	--	61	23	--	--	2,124
Miller	7	61	430	404	731	--	20	11	--	--	2,440
Morgan	3	45	225	162	348	--	62	5	--	--	1,249
Phelps	--	35	1,811	916	1,397	--	178	5	--	--	4,690
Polk	4	3	288	40	265	--	82	167	--	--	857
Pulaski	2	7	3,201	958	1,099	--	322	19	--	--	5,867
St Clair	--	24	123	37	39	--	--	8	--	33	358
Total	60	417	8,222	4,045	7,052	--	885	300	--	50	24,973
PRAIRIE UNIT											
Adair	--	79	6	151	118	--	47	8	--	3	519
Andrew	--	16	--	16	170	--	11	54	--	2	358
Atchison	--	11	--	4	3	--	--	5	--	--	102
Audrain	119	266	240	721	518	--	290	51	--	73	2,890
Barton	--	203	--	535	313	--	--	10	--	--	1,393
Bates	--	227	102	290	299	--	246	269	--	103	1,920
Buchanan	--	31	--	342	218	--	100	160	--	24	1,190
Caldwell	--	187	--	4	44	--	7	125	--	--	408
Carroll	15	195	--	56	137	--	1	89	--	5	1,020
Cass	--	18	18	--	90	--	18	190	--	--	359
Charlton	--	388	87	92	54	--	1	17	--	--	879
Clark	--	872	207	757	601	--	122	30	--	50	4,952
Clay	--	16	--	5	4	--	--	90	--	--	157
Clinton	--	31	--	55	86	--	87	119	--	3	634
Cooper	1	265	37	385	558	--	172	150	--	24	1,807

(Table 8 continued on next page)

(Table 8 continued)

Unit and county	Hard maple	Soft maple	Black oak	Red oak	White oak	Sweet-gum	Syca-more	Black walnut	Yellow-poplar	Other hard-woods	All species
PRAIRIE UNIT *(continued)*											
Dade	--	52	--	353	259	--	5	468	--	--	1,164
Daviess	6	9	--	35	284	--	24	25	--	--	718
De Kalb	--	10	--	11	183	--	--	63	--	1	381
Gentry	--	9	--	40	503	--	--	6	--	--	945
Greene	--	--	166	131	161	--	45	8	--	--	535
Grundy	--	442	--	63	88	--	24	11	--	3	1,193
Harrison	--	72	--	51	287	--	11	31	--	--	760
Henry	--	640	383	88	224	--	146	175	--	82	2,017
Holt	--	14	--	4	35	--	--	66	--	1	1,423
Jackson	--	--	--	5	39	--	--	45	--	--	130
Jasper	--	123	7	409	83	--	3	29	--	--	963
Johnson	--	--	88	--	206	--	48	253	--	17	727
Knox	--	212	29	419	315	--	116	14	--	10	1,501
Lafayette	--	59	--	11	53	--	10	181	--	35	512
Lawrence	--	5	--	590	460	--	83	20	--	--	1,173
Lewis	--	239	74	306	312	--	64	13	--	14	1,584
Lincoln	5	50	11	366	295	--	18	37	--	15	892
Linn	--	482	--	32	32	--	9	16	--	3	1,276
Livingston	--	1,050	--	300	129	--	10	38	--	3	2,426
Macon	14	122	19	309	166	--	85	10	--	3	936
Marion	--	98	57	392	398	--	81	34	--	10	1,459
Mercer	--	9	--	7	20	--	--	7	--	--	67
Monroe	72	264	393	757	655	--	192	52	--	80	3,052
Nodaway	--	16	1	12	68	--	--	9	--	--	274
Pettis	--	99	89	12	104	--	65	3	--	26	558
Pike	14	150	28	554	687	--	157	32	--	38	2,092
Platte	--	22	--	11	43	--	11	36	--	2	168
Putnam	--	11	--	29	26	--	7	16	--	11	103
Ralls	7	164	23	691	605	--	77	77	--	69	2,063
Randolph	23	162	197	644	229	--	108	3	--	28	1,567
Ray	--	20	--	9	85	--	--	200	--	--	357
Saline	--	335	7	41	33	--	62	18	--	50	772
Schuyler	--	11	2	16	47	--	3	6	--	3	165
Scotland	--	114	74	363	319	--	63	14	--	3	1,629
Shelby	25	228	197	568	235	--	87	5	--	1	1,596
Sullivan	--	27	--	20	16	--	3	12	--	1	123
Vernon	--	238	--	195	134	--	18	33	--	7	984
Worth	--	7	--	11	125	--	--	5	--	--	250
Total	301	8,370	2,522	11,268	11,154	--	2,737	3,438	--	803	57,123
RIVERBORDER UNIT											
Boone	1	77	103	366	620	--	126	108	--	23	1,595
Callaway	--	21	265	317	1,596	--	162	19	--	9	2,912
Cape Girardeau	68	73	1,355	3,007	2,573	3	129	35	947	18	10,948
Cole	--	5	32	32	364	--	--	3	--	--	786
Dunklin	14	11	16	207	63	76	11	--	--	--	522
Franklin	--	226	249	182	848	--	32	9	--	--	3,047
Gasconade	4	154	363	487	740	--	93	7	--	--	2,312
Howard	--	390	12	311	322	--	486	141	--	50	2,055
Jefferson	--	75	135	198	848	--	--	8	--	--	1,507
Mississippi	--	61	166	159	128	9	1	--	--	1,156	2,528
Moniteau	1	5	41	151	147	--	7	48	--	--	412
Montgomery	5	24	50	105	611	--	81	4	--	1	1,301
New Madrid	--	51	123	149	74	173	1	--	--	963	2,551
Osage	--	64	632	699	1,121	--	286	16	--	--	3,241
Pemiscot	--	--	--	--	1	--	--	--	--	--	177
Perry	35	--	75	1,587	1,822	18	--	49	222	--	5,243
St Charles	10	88	92	320	430	--	5	41	--	12	1,143
St Louis	2	110	104	105	261	--	2	4	--	--	827
St Genevieve	24	38	949	1,060	773	--	23	5	--	--	3,788
Scott	26	--	--	431	301	--	--	--	69	3	992
Stoddard	3	12	--	2,032	1,027	85	108	4	10	--	3,718
Warren	5	137	226	599	2,419	--	120	46	--	16	4,013
Total	198	1,622	4,988	12,504	17,089	364	1,673	547	1,248	2,251	55,618
State total	1,265	10,917	77,303	107,512	90,844	1,449	7,798	6,245	1,306	3,336	390,758

1/ International 1/4-inch rule.

Table 9.-- Saw log production by species group in Missouri, 1980 and 1987

(In thousand board feet) 1/

Species group	1980	1987	Change	Percent change
SOFTWOODS				
Cypress	--	361	361	--
Shortleaf pine	27,696	37,260	9,564	35
Redcedar	3,140	4,555	1,415	45
Total	30,836	42,176	11,340	37
HARDWOODS				
Ash	2,976	4,999	2,023	68
Basswood	257	324	67	26
Beech	45	100	55	122
Birch	1,922	281	-1,641	-85
Tupelo	2,191	611	-1,580	-72
Black cherry	369	302	-67	-18
Cottonwood	21,431	21,984	553	3
Elm	1,569	1,881	312	20
Pecan	220	220	0	--
Other hickory	12,770	16,691	3,921	31
Hard maple	3,031	1,818	-1,213	-40
Soft maple	6,088	13,560	7,472	123
Red oak	228,984	266,521	37,537	16
White oak	56,395	109,790	53,395	95
Sweetgum	7,772	2,096	-5,676	-73
Sycamore	12,237	10,511	-1,726	-14
Black walnut	15,448	12,292	-3,156	-20
Yellow poplar	785	1,890	1,105	141
Other hardwoods	175	1,284	1,109	634
Total	374,665	467,155	92,490	25
All species	405,501	509,331	103,830	26

1/ International 1/4-inch rule.

Table 10.-- Saw log production by species group and destination, Missouri, 1987

(In thousand board feet) 1/

ALL UNITS

Species group	Missouri	Iowa	Kansas	Arkansas	Other States	Total
SOFTWOODS						
Cypress	361	--	--	--	--	361
Shlortleaf pine	37,256	--	--	4	--	37,260
Redcedar	4,542	13	--	--	--	4,555
Total	42,159	13	--	4	--	42,176
HARDWOODS						
Ash	4,976	21	--	2	--	4,999
Basswood	324	--	--	--	--	324
Beech	100	--	--	--	--	100
Birch	281	--	--	--	--	281
Tupelo	611	--	--	--	--	611
Black cherry	302	--	--	--	--	302
Cottonwood	21,423	304	25	7	225	21,984
Elm	1,876	--	--	4	1	1,881
Pecan	212	--	--	7	1	220
Other hickory	16,596	91	--	4	--	16,691
Hard maple	1,818	--	--	--	--	1,818
Soft maple	13,123	422	--	15	--	13,560
Black oak	110,799	91	--	--	1	110,891
Red oak	154,945	511	--	173	1	155,630
White oak	108,594	359	663	173	1	109,970
Sweetgum	2,074	--	--	22	--	2,096
Sycamore	10,466	40	--	4	1	10,511
Black walnut	8,738	51	3,478	--	25	12,292
Yellow-poplar	1,890	--	--	--	--	1,890
Other hardwoods	1,256	21	--	7	--	1,284
Total	460,404	1,911	4,166	418	256	467,335
All species	502,563	1,924	4,166	422	256	509,511

EASTERN OZARK UNIT

SOFTWOODS						
Cypress	310	--	--	--	--	310
Shlortleaf pine	31,259	--	--	4	--	31,263
Redcedar	297	--	--	--	--	297
Total	31,866	--	--	4	--	31,870
HARDWOODS						
Ash	333	--	--	1	--	334
Beech	18	--	--	--	--	18
Birch	4	--	--	--	--	4
Tupelo	439	--	--	--	--	439
Black cherry	82	--	--	--	--	82
Cottonwood	813	--	--	--	--	813
Elm	821	--	--	4	--	825
Hickory	9,861	--	--	3	--	9,864
Hard maple	1,023	--	--	--	--	1,023
Soft maple	701	--	--	15	--	716
Black oak	68,294	--	--	--	--	68,294
Red oak	86,118	--	--	126	--	86,244
White oak	56,057	--	--	126	--	56,183
Sweetgum	1,552	--	--	8	--	1,560
Sycamore	1,942	--	--	3	--	1,945
Black walnut	97	--	--	--	--	97
Yellow-poplar	84	--	--	--	--	84
Other hardwoods	331	--	--	6	--	337
Total	228,570	--	--	292	--	228,862
All species	260,436	--	--	296	--	260,732

(Table 10 continued on next page)

(Table 10 continued)

SOUTHWEST OZARK UNIT

Species group	Missouri	Iowa	Kansas	Arkansas	Other States	Total
SOFTWOODS						
Shlortleaf pine	5,668	--	--	--	--	5,668
Redcedar	1,836	--	--	--	--	1,836
Total	7,504	--	--	--	--	7,504
HARDWOODS						
Ash	334	--	--	--	--	334
Tupelo	63	--	--	--	--	63
Cottonwood	--	--	--	--	1	1
Elm	48	--	--	--	1	49
Pecan	--	--	--	--	1	1
Other hickory	2,273	--	--	--	--	2,273
Soft maple	--	--	--	--	--	17
Black oak	20,402	--	--	--	1	20,403
Red oak	29,543	--	--	--	1	29,544
White oak	17,803	--	--	--	1	17,804
Sweetgum	10	--	--	--	--	10
Sycamore	1,664	--	--	--	1	1,665
Black walnut	3,863	--	--	--	--	3,863
Total	76,020	--	--	--	7	76,027
All species	83,524	--	--	--	7	83,531

NORTHWEST OZARK UNIT

SOFTWOODS						
Shlortleaf pine	71	--	--	--	--	71
Redcedar	926	--	--	--	--	926
Total	997	--	--	--	--	997
HARDWOODS						
Ash	397	--	--	--	--	397
Basswood	4	--	--	--	--	4
Tupelo	81	--	--	--	--	81
Black cherry	58	--	--	--	--	58
Cottonwood	78	--	--	--	--	78
Elm	46	--	--	--	--	46
Hickory	617	--	--	--	--	617
Hard maple	81	--	--	--	--	81
Soft maple	463	--	--	--	--	463
Black oak	11,750	--	--	--	--	11,750
Red oak	5,730	--	--	--	--	5,730
White oak	7,406	--	--	--	--	7,406
Sycamore	1,275	--	--	--	--	1,275
Black walnut	554	--	--	--	--	554
Other hardwoods	48	--	--	--	--	48
Total	28,588	--	--	--	--	28,588
All species	29,585	--	--	--	--	29,585

(Table 10 continued on next page)

(Table 10 continued)

Species group	Missouri	Iowa	Kansas	Arkansas	Other States	Total
PRAIRIE UNIT						
SOFTWOODS						
Redcedar	35	13	--	--	--	48
Total	35	13	--	--	--	48
HARDWOODS						
Ash	2,815	21	--	--	--	2,836
Basswood	311	--	--	--	--	311
Birch	264	--	--	--	--	264
Black cherry	26	--	--	--	--	26
Cottonwood	10,947	304	25	--	224	11,500
Elm	757	--	--	--	--	757
Pecan	168	--	--	--	--	168
Other hickory	1,758	91	--	--	--	1,849
Hard maple	426	--	--	--	--	426
Soft maple	9,930	422	--	--	--	10,352
Black oak	3,507	91	--	--	--	3,598
Red oak	15,764	511	--	--	--	16,275
White oak	10,981	359	663	--	--	12,003
Sycamore	3,625	40	--	--	--	3,665
Black walnut	3,221	51	3,478	--	25	6,775
Other hardwoods	790	21	--	--	--	811
Total	65,290	1,911	4,166	--	249	71,616
All species	65,325	1,924	4,166	--	249	71,664
RIVERBORDER UNIT						
SOFTWOODS						
Cypress	51	--	--	--	--	51
Shlortleaf pine	258	--	--	--	--	258
Redcedar	1,448	--	--	--	--	1,448
Total	1,757	--	--	--	--	1,757
HARDWOODS						
Ash	1,097	--	--	1	--	1,098
Basswood	9	--	--	--	--	9
Beech	82	--	--	--	--	82
Birch	13	--	--	--	--	13
Tupelo	28	--	--	--	--	28
Black cherry	136	--	--	--	--	136
Cottonwood	9,585	--	--	7	--	9,592
Elm	204	--	--	--	--	204
Pecan	44	--	--	7	--	51
Other hickory	2,087	--	--	1	--	2,088
Hard maple	288	--	--	--	--	288
Soft maple	2,012	--	--	--	--	2,012
Black oak	6,846	--	--	--	--	6,846
Red oak	17,790	--	--	47	--	17,837
White oak	16,347	--	--	47	--	16,394
Sweetgum	512	--	--	14	--	526
Sycamore	1,960	--	--	1	--	1,961
Black walnut	1,003	--	--	--	--	1,003
Yellow-poplar	1,806	--	--	--	--	1,806
Other hardwoods	87	--	--	1	--	88
Total	61,936	--	--	126	--	62,062
All species	63,693	--	--	126	--	63,819

1/ International 1/4-inch rule.

Table 11.-- Saw log receipts in Missouri by Forest Survey Unit, species group and state of origin, 1987

(In thousand board feet) 1/

	ALL UNITS									
Species group	All states	Missouri	Illinois	Arkansas	Kansas	Kentucky	Indiana	Iowa	Oklahoma	Other
SOFTWOODS										
Cypress	370	361	--	9	--	--	--	--	--	--
Shortleaf pine	37,366	37,256	--	110	--	--	--	--	--	--
Redcedar	4,691	4,542	--	149	--	--	--	--	--	--
Total	42,427	42,159	--	268	--	--	--	--	--	--
HARDWOODS										
Ash	6,338	4,976	1,157	--	--	55	105	23	--	22
Basswood	441	324	33	--	84	--	--	--	--	--
Beech	286	100	184	--	--	--	--	2	--	--
Birch	299	281	10	--	--	--	--	8	--	--
Tupelo	611	611	0	--	--	--	--	--	--	--
Black cherry	360	302	48	--	--	--	--	10	--	--
Cottonwood	25,305	21,423	1,448	--	298	1,974	--	162	--	--
Elm	1,944	1,876	60	--	7	--	--	1	--	--
Pecan	281	212	55	--	14	--	--	--	--	--
Other hickory	17,759	16,596	521	425	113	96	--	8	--	--
Hard maple	2,065	1,818	230	--	17	--	--	--	--	--
Soft maple	14,437	13,123	994	--	8	258	--	31	--	23
Black oak	111,562	110,799	698	51	--	--	--	13	1	--
Red oak	168,575	154,945	8,920	2,430	1,720	284	--	198	--	78
White oak	116,797	108,594	5,305	1,138	624	66	782	112	--	176
Sweetgum	2,091	2,074	12	5	--	--	--	--	--	--
Sycamore	11,578	10,466	430	255	153	249	--	25	--	--
Black walnut	11,503	8,738	1,347	345	432	44	--	168	345	84
Yellow-poplar	3,308	1,890	1,418	--	--	--	--	--	--	--
Other hardwoods	1,580	1,256	174	--	144	--	--	6	--	--
Total	497,120	460,404	23,044	4,649	3,614	3,026	887	767	346	383
All species	539,547	502,563	23,044	4,917	3,614	3,026	887	767	346	383

(Table 11 continued on next page)

(Table 11 continued)

EASTERN OZARKS

Species group	All States	Missouri	Arkansas	Illinois	Kentucky
SOFTWOODS					
Cypress	310	310	--	--	--
Shortleaf pine	30,206	30,206	--	--	--
Redcedar	643	641	2	--	--
Total	31,159	31,157	2	--	--
HARDWOODS					
Ash	273	273	--	--	--
Beech	18	18	--	--	--
Birch	4	4	--	--	--
Tupelo	445	445	--	--	--
Black cherry	72	72	--	--	--
Cottonwood	467	467	--	--	--
Elm	825	825	--	--	--
Other hickory	10,965	10,299	425	145	96
Hard maple	1,083	1,083	--	--	--
Soft maple	428	428	--	--	--
Black oak	67,733	67,678	50	5	--
Red oak	88,071	85,641	2,430	--	--
White oak	55,870	54,728	1,138	4	--
Sweegum	1,615	1,610	5	--	--
Sycamore	2,233	1,978	255	--	--
Black walnut	20	20	--	--	--
Yellow-poplar	89	89	--	--	--
Other hardwoods	331	331	--	--	--
Total	261,701	257,146	4,305	154	96
All species	291,907	287,352	4,305	154	96

SOUTHWEST OZARKS

Species group	All states	Missouri	Arkansas	Kansas	Oklahoma
SOFTWOODS					
Shortleaf pine	6,830	6,720	110	--	--
Redcedar	1,981	1,834	147	--	--
Total	8,811	8,554	257	--	--
HARDWOODS					
Ash	342	342	--	--	--
Tupelo	63	63	--	--	--
Black cherry	23	23	--	--	--
Cottonwood	373	75	--	298	--
Elm	48	48	--	--	--
Other hickory	1,927	1,927	--	--	--
Hard maple	21	4	--	17	--
Soft maple	21	21	--	--	--
Black oak	20,660	20,660	--	--	--
Red oak	28,843	28,843	--	--	--
White oak	18,930	18,913	--	17	--
Sweetgum	17	17	--	--	--
Sycamore	1,633	1,633	--	--	--
Black walnut	5,048	4,185	345	173	345
Total	77,949	76,754	345	505	345
All species	86,760	85,308	602	505	345

NORTHWEST OZARKS

Species group	All states	Missouri
SOFTWOODS		
Shlf pine	38	38
Redcedar	928	928
Total	966	966
HARDWOODS		
Ash	380	380
Basswood	3	3
Tupelo	81	81
Black cherry	35	35
Cottonwood	4	4
Elm	46	46
Other hickory	636	636
Hard maple	77	77
Soft maple	342	342
Black oak	12,085	12,085
Red oak	5,357	5,357
White oak	7,149	7,149
Sycamore	1,326	1,326
Black walnut	190	190
Total	27,711	27,711
All species	28,677	28,677

(Table 11 continued on next page)

(Table 11 continued)

PRAIRIE

Species group	All states	Missouri	Illinois	Kansas	Iowa	Kentucky	Tennessee	Nebraska	Arkansas	Other
SOFTWOODS										
Redcedar	35	35	--	--	--	--	--	--	--	--
Total	35	35	--	--	--	--	--	--	--	--
HARDWOODS										
Ash	3,616	2,938	611	--	23	22	22	--	--	--
Basswood	397	313	--	84	--	--	--	--	--	--
Beech	2	--	--	--	2	--	--	--	--	--
Birch	282	264	10	--	8	--	--	--	--	--
Black cherry	57	32	15	--	10	--	--	--	--	--
Cottonwood	11,806	11,026	618	--	162	--	--	--	--	--
Elm	769	761	--	7	1	--	--	--	--	--
Pecan	212	176	22	14	--	--	--	--	--	--
Ohter hickory	1,723	1,545	57	113	8	--	--	--	--	--
Hard maple	363	324	39	--	--	--	--	--	--	--
Soft maple	10,945	9,969	892	8	31	22	22	1	--	--
Black oak	3,515	3,446	54	--	13	--	--	--	1	1
Red oak	19,522	13,801	3,694	1,720	163	66	66	12	--	--
White oak	13,836	10,383	2,517	607	87	66	66	110	--	--
Sycamore	3,749	3,286	285	153	25	--	--	--	--	--
Black walnut	4,871	3,131	1,208	259	145	44	44	40	--	--
Other hardwoods	1,180	871	159	144	6	--	--	--	--	--
Total	76,845	62,266	10,181	3,109	684	220	220	163	1	1
All species	76,880	62,301	10,181	3,109	684	220	220	163	1	1

RIVERBORDER

Species group	All states	Missouri	Illinois	Kentucky	Indiana	Iowa	Arkansas
SOFTWOODS							
Cypress	60	51	--	--	--	--	9
Shortleaf pine	292	292	--	--	--	--	--
Redcedar	1,104	1,104	--	--	--	--	--
Total	1,456	1,447	--	--	--	--	9
HARDWOODS							
Ash	1,727	1,043	546	33	105	--	--
Basswood	41	8	33	--	--	--	--
Beech	266	82	184	--	--	--	--
Birch	13	13	--	--	--	--	--
Tupelo	22	22	--	--	--	--	--
Black cherry	173	140	33	--	--	--	--
Cottonwood	12,655	9,851	830	1,974	--	--	--
Elm	256	196	60	--	--	--	--
Pecan	69	36	33	--	--	--	--
Other hickory	2,508	2,189	319	--	--	--	--
Hard maple	521	330	191	--	--	--	--
Soft maple	2,701	2,363	102	236	--	--	--
Black oak	7,569	6,930	639	--	--	--	--
Red oak	26,782	21,303	5,226	218	--	35	--
White oak	21,012	17,421	2,784	--	782	25	--
Sweetgum	459	447	12	--	--	--	--
Sycamore	2,637	2,243	145	249	--	--	--
Black walnut	1,374	1,212	139	--	--	--	--
Yellow-poplar	3,219	1,801	1,418	--	--	--	--
Other hardwoods	69	54	15	--	--	--	--
Total	84,073	67,684	12,709	2,710	887	83	--
All species	85,529	69,131	12,709	2,710	887	83	9

1/ International 1/4-inch rule.

Table 12.-- Veneer production by species group in Missouri, 1980 and 1987

(In thousand board feet) 1/

Species group	1980	1987	Change	Percent change
Ash	--	610	610	--
Cottonwood	1,072	490	-582	-54
Pecan	62	52	-10	-16
Other hickory	32	0	-32	--
Hard maple	--	3	3	--
Red oak	--	124	124	--
White oak	975	2,485	1,510	155
Sycamore	57	0	-57	-100
Black walnut	1,075	964	-111	-10
Other hardwoods	2	0	-2	-100
All species	3,275	4,728	1,453	44

1/ International 1/4-inch rule.

Table 13.-- Veneer log production by species and destination, Missouri, 1987

(In thousand board feet) 1/

Species group	Total	Missouri	Illinois	Canada
Ash	610	--	2	608
Cottonwood	490	490	--	--
Pecan	52	--	--	52
Hard maple	3	3	--	--
Red oak	124	--	--	124
White oak	2,485	3	86	2,396
Black walnut	964	169	55	740
All species	4,728	665	143	3,920

1/ International 1/4-inch rule.

Table 14.-- Veneer log receipts in Missouri by species group and area of origin, 1987

(In thousand board feet) 1/

Species group	All States	Tennessee	Missouri	Kentucky	Kansas	Iowa	Arkansas	Pennsylvania	Illinois	Other States
SOFTWOODS										
Shortleaf pine	222	--	--	--	--	--	222	--	--	--
Total	222	--	--	--	--	--	222	--	--	--
HARDWOODS										
Black cherry	89	--	--	--	--	--	--	89	--	--
Cottonwood	1,682	946	490	--	246	--	--	--	--	--
Elm	1	1	--	--	--	--	--	--	--	--
Hard maple	17	--	3	--	14	--	--	--	--	--
Soft maple	2	2	--	--	--	--	--	--	--	--
Red oak	222	--	--	74	--	--	--	74	--	74
White oak	818	--	3	561	14	160	--	--	40	40
Sycamore	17	17	--	--	--	--	--	--	--	--
Black walnut	368	--	169	--	33	81	--	--	38	47
Other hardwoods	2	2	--	--	--	--	--	--	--	--
Total	3,218	968	665	635	307	241	--	163	78	161
All species	3,440	968	665	635	307	241	222	163	78	161

1/ International 1/4-inch rule.

Table 15.-- Logging residue generated during industrial roundwood production by species group, Forest Survey Unit, and county, Missouri, 1987

(In thousand cubic feet)

Unit and county	Cypress	Shortleaf pine	Red-cedar	Ash	Bass-wood	Beech	Birch	Tupelo	Black cherry	Cotton-wood	Elm	Pecan	Other hickory
EASTERN OZARK UNIT													
Bollinger	--	42	--	11	--	3	--	14	1	9	30	--	199
Butler	1	115	--	6	--	--	--	14	--	9	34	--	44
Carter	10	482	--	--	--	--	--	3	--	8	--	--	170
Crawford	--	66	3	1	--	--	--	--	--	13	2	--	38
Dent	--	202	4	--	--	--	--	--	1	--	6	--	25
Iron	--	164	4	--	--	--	--	1	--	--	--	--	50
Madison	--	245	8	4	--	--	--	--	--	--	1	--	74
Oregon	3	146	--	--	--	--	--	--	--	--	--	--	215
Reynolds	--	393	14	--	--	--	--	--	--	--	4	--	166
Ripley	--	161	--	14	--	--	--	12	6	5	41	--	194
St Francois	--	--	1	--	--	--	--	--	--	--	--	--	3
Shannon	19	585	--	11	--	--	--	22	4	--	--	--	229
Washington	--	277	13	1	--	--	--	--	--	21	5	--	18
Wayne	--	426	--	4	--	--	--	6	--	7	7	--	193
Total	33	3,304	47	52	--	3	--	72	12	72	130	--	1,618
SOUTHWEST OZARK UNIT													
Barry	--	--	46	16	--	--	--	--	--	--	4	--	13
Christian	--	--	17	3	--	--	--	--	--	--	--	--	--
Douglas	--	39	--	3	--	--	--	--	--	--	--	--	34
Howell	--	147	--	--	--	--	--	3	--	--	--	--	130
Mcdonald	--	1	--	--	--	--	--	--	--	--	--	--	29
Newton	--	--	--	--	--	--	--	--	--	--	--	--	26
Ozark	--	15	49	1	--	--	--	--	--	--	--	--	29
Stone	--	--	14	14	--	--	--	--	--	--	--	--	--
Taney	--	12	186	--	--	--	--	--	--	--	--	--	2
Texas	--	382	--	6	--	--	--	6	--	--	3	--	86
Webster	--	--	--	15	--	--	--	--	--	--	--	--	3
Wright	--	3	--	3	--	--	--	--	--	--	--	--	16
Unit total	--	599	312	61	--	--	--	9	--	--	7	--	368
NORTHWEST OZARK UNIT													
Benton	--	--	17	--	--	--	--	--	--	1	--	--	4
Camden	--	--	36	3	--	--	--	--	--	1	--	--	11
Cedar	--	--	--	6	--	--	--	--	--	--	--	--	--
Dallas	--	--	4	--	--	--	--	--	--	--	--	--	--
Hickory	--	--	19	--	--	--	--	--	--	--	--	--	--
Laclede	--	--	21	4	--	--	--	--	6	--	--	--	--
Maries	--	--	38	4	--	--	--	--	--	--	--	--	9
Miller	--	--	22	14	--	--	--	--	--	--	--	--	2
Morgan	--	--	10	4	--	--	--	--	--	--	--	--	2
Phelps	--	4	--	3	--	--	--	11	--	--	4	--	50
Polk	--	--	2	2	--	--	--	--	--	--	--	--	4
Pulaski	--	3	21	20	--	--	--	3	1	--	2	--	18
St Clair	--	--	--	6	--	--	--	--	--	7	--	--	--
Total	--	7	190	66	--	--	--	14	7	9	6	--	100
PRAIRIE UNIT													
Adair	--	--	--	4	--	--	1	--	--	6	--	--	4
Andrew	--	--	--	1	2	--	--	--	--	6	1	--	3
Atchison	--	--	--	--	--	--	--	--	--	8	--	--	--
Audrain	--	--	--	24	--	--	6	--	--	25	11	--	42
Barton	--	--	--	34	--	--	--	--	--	1	14	--	21
Bates	--	--	--	53	--	--	--	--	--	1	28	--	3
Buchanan	--	--	--	3	4	--	--	--	--	27	--	--	6
Caldwell	--	--	--	2	--	--	--	--	--	3	--	--	--
Carroll	--	--	--	2	--	--	--	--	--	49	--	--	6
Cass	--	--	--	--	--	--	--	--	--	2	--	--	--
Charlton	--	--	--	4	--	--	--	--	--	16	--	--	--
Clark	--	--	1	11	--	--	6	--	--	145	4	--	20
Clay	--	--	--	3	--	--	--	--	--	3	--	--	--
Clinton	--	--	--	--	--	--	--	--	--	25	--	--	--

(Table 15 continued on next page)

(Table 15 continued)

Unit and county	Cypress	Shortleaf pine	Red-cedar	Ash	Bass-wood	Beech	Birch	Tupelo	Black cherry	Cotton-wood	Elm	Pecan	Other hickory
PRAIRIE UNIT *(continued)*													
Cooper	--	--	1	3	1	--	--	--	--	4	--	--	2
Dade	--	--	--	1	--	--	--	--	--	--	1	--	2
Daviess	--	--	--	4	11	--	--	--	--	20	2	--	4
De Kalb	--	--	--	3	2	--	--	--	--	8	2	--	2
Gentry	--	--	--	8	8	--	--	--	2	24	8	--	8
Greene	--	--	--	3	--	--	--	--	--	--	--	--	1
Grundy	--	--	--	21	6	--	--	--	--	45	--	--	--
Harrison	--	--	--	8	8	--	--	--	--	21	3	--	4
Henry	--	--	3	15	--	--	--	--	--	11	8	--	11
Holt	--	--	--	--	--	--	--	--	--	134	--	--	--
Jackson	--	--	--	--	--	--	--	--	--	5	--	--	--
Jasper	--	--	--	32	--	--	--	--	--	1	14	--	22
Johnson	--	--	--	--	--	--	4	--	--	5	4	--	--
Knox	--	--	--	14	1	--	4	--	--	23	--	--	14
Lafayette	--	--	--	--	--	--	--	--	--	7	--	--	--
Lawrence	--	--	--	1	--	--	--	--	--	--	--	--	--
Lewis	--	--	--	3	--	--	1	--	--	31	--	--	6
Lincoln	--	--	--	10	--	--	--	--	--	1	--	--	3
Linn	--	--	--	16	--	--	--	--	--	42	--	--	--
Livingston	--	--	--	22	1	--	--	--	--	81	1	--	--
Macon	--	--	--	4	--	--	3	--	--	13	--	--	14
Marion	--	--	1	6	--	--	4	--	--	31	2	--	4
Mercer	--	--	--	--	--	--	--	--	--	2	--	--	--
Monroe	--	--	--	32	--	--	6	--	--	30	11	--	18
Nodaway	--	--	--	1	--	--	--	--	--	15	1	--	--
Pettis	--	--	--	--	--	--	4	--	--	6	--	--	4
Pike	--	--	--	14	--	--	--	--	--	33	--	--	8
Platte	--	--	--	3	--	--	--	--	--	3	--	--	--
Putnam	--	--	--	--	--	--	--	--	--	--	--	--	--
Ralls	--	--	--	18	--	--	--	--	--	25	--	1	4
Randolph	--	--	--	11	--	--	--	--	--	1	1	--	20
Ray	--	--	--	--	--	--	--	--	--	5	--	--	--
Saline	--	--	--	4	--	--	--	--	--	17	--	--	1
Schuyler	--	--	--	--	--	--	--	--	--	7	--	--	--
Scotland	--	--	--	6	--	--	1	--	--	58	--	--	15
Shelby	--	--	--	14	--	--	2	--	--	11	2	--	15
Sullivan	--	--	--	--	--	--	--	--	--	3	--	--	--
Vernon	--	--	--	46	--	--	--	--	--	--	3	25	4
Worth	--	--	--	2	2	--	--	--	--	7	2	--	2
Total	--	--	6	466	46	--	42	--	2	1,047	123	26	293
RIVERBORDER UNIT													
Boone	--	--	--	7	--	--	--	--	--	2	--	--	4
Callaway	--	--	96	4	--	--	--	--	--	29	6	--	6
Cape Girardeau	--	--	--	52	--	11	--	--	6	180	4	--	150
Cole	--	--	5	1	--	--	--	--	--	--	--	--	--
Dunklin	--	--	--	--	--	--	1	--	--	5	4	--	7
Franklin	--	--	72	1	--	--	--	--	--	136	--	--	6
Gasconade	--	--	--	4	--	--	--	--	--	42	--	--	1
Howard	--	--	--	2	--	--	--	--	--	13	2	--	2
Jefferson	--	3	14	4	--	--	--	--	--	15	--	--	--
Mississippi	--	--	--	--	--	--	--	--	--	76	--	1	1
Moniteau	--	--	--	2	--	--	--	--	--	--	--	--	--
Montgomery	--	--	48	--	--	--	--	--	--	32	--	--	4
New Madrid	--	--	--	--	--	--	--	--	--	97	--	--	1
Osage	--	--	3	22	--	--	--	--	--	7	--	--	4
Pemiscot	--	--	--	--	--	--	--	--	--	3	--	--	--
Perry	--	--	--	47	--	2	--	--	11	87	4	--	69
St Charles	--	--	--	6	1	--	--	--	1	8	--	2	2
St Louis	--	--	7	--	--	--	--	--	--	21	--	--	--
St Genevieve	--	24	5	--	--	--	--	2	--	65	2	--	6
Scott	--	--	--	11	--	--	--	1	--	7	--	--	9
Stoddard	5	--	--	2	--	--	--	--	1	5	4	4	61
Warren	--	--	--	8	--	--	--	--	--	37	3	--	4
Total	5	27	250	173	1	13	1	3	19	867	29	7	337
STATE TOTAL	38	3,937	805	818	47	16	43	98	40	1,995	295	33	2,716

(Table 15 continued on next page)

(Table 15 continued)

Unit and county	Hard maple	Soft maple	Black oak	Red oak	White oak	Sweet-gum	Syca-more	Black walnut	Yellow-poplar	Other hard-woods	All species
EASTERN OZARK UNIT											
Bollinger	76	41	448	812	607	2	20	--	14	--	2,329
Butler	15	4	101	337	176	32	4	--	--	--	892
Carter	--	4	427	777	366	2	3	--	--	--	2,252
Crawford	--	18	716	419	614	--	24	--	--	--	1,914
Dent	2	--	1,242	446	654	76	32	4	--	--	2,694
Iron	3	--	618	571	431	4	22	--	--	--	1,868
Madison	14	--	236	705	217	13	47	--	--	--	1,564
Oregon	--	--	241	1,122	547	4	38	--	--	--	2,316
Reynolds	3	--	1,311	1,453	918	4	11	--	--	--	4,277
Ripley	37	6	372	1,179	661	97	62	--	--	8	2,855
St Francois	4	--	79	54	54	--	9	--	--	--	204
Shannon	4	1	809	1,135	730	8	13	--	--	45	3,615
Washington	--	29	819	330	313	--	6	--	--	--	1,832
Wayne	7	14	923	1,198	719	7	22	--	--	--	3,533
Total	165	117	8,342	10,538	7,007	249	313	4	14	53	32,145
SOUTHWEST OZARK UNIT											
Barry	--	--	105	262	179	--	70	21	--	--	716
Christian	--	--	17	101	30	--	4	--	--	--	172
Douglas	--	--	733	355	303	--	24	68	--	--	1,559
Howell	--	--	172	736	459	--	11	20	--	--	1,678
Mcdonald	--	--	38	509	128	--	31	21	--	--	757
Newton	--	--	16	544	135	--	27	5	--	--	753
Ozark	--	--	10	191	38	--	14	9	--	--	356
Stone	--	--	2	101	31	--	9	--	--	--	171
Taney	--	--	42	15	22	--	--	--	--	--	279
Texas	--	2	857	503	534	1	13	38	--	--	2,431
Webster	--	--	62	130	102	--	24	1	--	--	337
Wright	--	--	441	166	231	--	42	36	--	--	938
Total	--	2	2,495	3,613	2,192	1	269	219	--	--	10,147
NORTHWEST OZARK UNIT											
Benton	--	4	10	14	22	--	3	--	--	--	75
Camden	4	2	48	45	62	--	15	1	--	--	228
Cedar	--	18	--	31	31	--	--	--	--	--	86
Dallas	--	--	38	17	30	--	8	--	--	--	97
Hickory	--	--	3	3	3	--	--	--	--	--	28
Laclede	4	6	168	79	149	--	15	4	--	--	456
Maries	--	7	93	69	93	--	15	3	--	--	331
Miller	1	14	73	69	79	--	4	--	--	--	278
Morgan	--	11	40	28	41	--	15	--	--	--	151
Phelps	--	8	321	163	233	--	41	--	--	--	838
Polk	--	--	50	7	45	--	15	21	--	--	146
Pulaski	--	1	568	168	180	--	74	1	--	--	1,060
St Clair	--	6	22	7	4	--	--	--	--	8	60
Total	9	77	1,434	700	972	--	205	30	--	8	3,834
PRAIRIE UNIT											
Adair	--	18	--	26	15	--	11	--	--	--	85
Andrew	--	4	--	3	24	--	3	5	--	--	52
Atchison	--	3	--	--	--	--	--	--	--	--	11
Audrain	28	62	43	129	92	--	66	5	--	18	551
Barton	--	47	--	95	53	--	--	1	--	--	266
Bates	--	52	18	51	51	--	56	32	--	24	369
Buchanan	--	7	--	62	39	--	24	18	--	6	196
Caldwell	--	42	--	--	7	--	1	15	--	--	70
Carroll	4	45	--	10	23	--	--	9	--	1	149
Cass	--	4	4	--	14	--	4	22	--	--	50
Chariton	--	72	12	17	7	--	--	1	--	--	129
Clark	--	65	30	123	67	--	26	--	--	1	499
Clay	--	4	--	--	--	--	--	9	--	--	19
Clinton	--	7	--	10	15	--	20	13	--	--	90

(Table 15 continued on next page)

(Table 15 continued)

Unit and county	Hard maple	Soft maple	Black oak	Red oak	White oak	Sweet-gum	Syca-more	Black walnut	Yellow-poplar	Other hard-woods	All species
PRAIRIE UNIT *(continued)*											
Cooper	--	38	7	69	100	--	25	17	--	--	267
Dade	--	13	--	63	45	--	1	57	--	--	183
Daviess	--	2	--	6	43	--	6	3	--	--	101
De Kalb	--	3	--	2	25	--	--	8	--	--	55
Gentry	--	2	--	7	63	--	--	--	--	--	130
Greene	--	--	30	23	27	--	11	--	--	--	95
Grundy	--	102	--	12	15	--	6	1	--	--	208
Harrison	--	18	--	7	42	--	3	4	--	--	118
Henry	--	148	69	16	39	--	34	21	--	19	394
Holt	--	3	--	--	6	--	--	8	--	--	151
Jackson	--	--	--	1	7	--	--	5	--	--	18
Jasper	--	28	1	73	14	--	--	4	--	--	189
Johnson	--	--	16	--	36	--	6	30	--	--	101
Knox	--	45	5	75	46	--	28	1	--	2	258
Lafayette	--	4	--	2	9	--	1	22	--	--	45
Lawrence	--	1	--	106	80	--	20	1	--	--	209
Lewis	--	16	12	51	34	--	15	--	--	--	169
Lincoln	1	11	2	66	43	--	4	4	--	4	149
Linn	--	112	--	6	5	--	2	1	--	--	184
Livingston	--	242	--	54	18	--	3	4	--	--	426
Macon	3	28	4	55	24	--	20	--	--	--	168
Marion	--	22	10	69	44	--	19	4	--	3	219
Mercer	--	2	--	1	2	--	--	--	--	--	7
Monroe	18	61	69	135	102	--	45	5	--	19	551
Nodaway	--	4	--	2	7	--	--	--	--	--	30
Pettis	--	9	16	2	17	--	8	--	--	--	66
Pike	3	34	5	99	104	--	36	4	--	9	349
Platte	--	4	--	2	7	--	3	4	--	--	26
Putnam	--	3	--	4	3	--	1	1	--	3	15
Ralls	2	38	4	124	87	--	18	9	--	16	346
Randolph	5	31	36	114	37	--	20	--	--	--	276
Ray	--	4	--	1	14	--	--	25	--	--	49
Saline	--	66	1	7	6	--	3	1	--	--	106
Schuyler	--	2	--	2	6	--	--	--	--	--	17
Scotland	--	24	14	63	46	--	15	1	--	--	243
Shelby	6	52	36	101	39	--	20	--	--	--	298
Sullivan	--	6	--	4	1	--	--	1	--	--	15
Vernon	--	56	--	36	23	--	4	4	--	2	203
Worth	--	1	--	2	14	--	--	--	--	--	32
Total	70	1,667	444	1,988	1,687	--	588	380	--	127	9,002
RIVERBORDER UNIT											
Boone	--	15	18	66	62	--	6	13	--	--	193
Callaway	--	4	47	56	157	--	37	1	--	2	445
Cape Girardeau	16	18	241	535	437	--	30	4	218	4	1,906
Cole	--	1	6	6	20	--	--	--	--	--	39
Dunklin	3	3	3	38	12	18	3	--	--	--	97
Franklin	--	52	45	31	70	--	7	--	--	--	420
Gasconade	--	35	65	86	92	--	22	--	--	--	347
Howard	--	66	2	56	55	--	65	17	--	2	282
Jefferson	--	18	24	35	101	--	--	--	--	--	214
Mississippi	--	1	2	8	7	2	--	--	--	17	115
Moniteau	--	1	7	26	24	--	1	5	--	--	66
Montgomery	1	6	9	18	38	--	19	--	--	--	175
New Madrid	--	1	2	8	1	41	--	--	--	14	165
Osage	--	15	110	123	182	--	66	1	--	--	533
Pemiscot	--	--	--	--	--	--	--	--	--	--	3
Perry	8	--	14	282	297	4	--	5	52	--	882
St Charles	3	20	17	57	72	--	1	4	--	3	197
St Louis	--	26	18	18	28	--	--	--	--	--	118
St Genevieve	6	9	169	189	120	--	5	--	--	--	602
Scott	6	--	--	76	51	--	--	--	16	--	177
Stoddard	--	3	--	362	181	20	25	--	3	--	676
Warren	1	32	40	107	228	--	28	5	--	4	497
Total	44	326	839	2,183	2,235	85	315	55	289	46	8,149
STATE TOTAL	288	2,189	13,554	19,022	14,093	335	1,690	688	303	234	63,277

Table 16.-- Residue produced at primary wood-using mills by type of material, by type of use, and county, Missouri ,1987

(In thousand tons, green weight)

EASTERN OZARK UNIT

County and type of use	Wood residue							
	Total		Coarse 1/		Fine 2/		Bark	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
Bollinger								
Fiber products	--	10.24	--	7.47	--	2.77	--	--
Charcoal	--	2.94	--	2.94	--	--	--	1.25
Domestic fuel	--	4.44	--	4.44	--	--	--	1.87
Miscellaneous 3/	0.19	3.43	0.11	1.38	0.08	2.05	0.05	1.74
Not used	0.38	6.47	0.25	2.43	0.13	6.04	0.11	3.05
Total	0.57	29.52	0.36	18.66	0.21	10.86	0.16	7.91
Butler								
Charcoal	--	0.70	--	0.70	--	--	--	0.30
Domestic fuel	--	1.44	--	1.44	--	--	--	0.61
Not used	1.50	10.68	0.95	5.95	0.55	4.73	0.41	2.54
Total	1.50	12.82	0.95	8.09	0.55	4.73	0.41	3.45
Carter								
Fiber products	1.17	0.39	--	--	1.17	0.39	--	--
Charcoal	4.92	17.81	4.92	17.81	--	--	2.10	5.14
Industrial fuel	0.41	0.40	--	--	0.41	0.40	--	--
Domestic fuel	--	0.28	--	0.28	--	--	--	0.12
Miscellaneous 3/	0.01	0.02	--	--	0.01	0.02	0.28	0.19
Not used	5.92	11.47	2.93	0.97	2.99	10.50	1.09	2.79
Total	12.43	30.37	7.85	19.06	4.58	11.31	3.47	8.24
Crawford								
Charcoal	1.21	10.99	1.05	9.39	0.16	1.60	0.34	3.98
Industrial fuel	0.07	3.64	0.07	3.64	--	--	0.03	1.57
Domestic fuel	0.04	5.20	0.04	5.04	--	0.16	0.01	2.09
Miscellaneous 3/	--	4.50	--	0.47	--	4.03	0.11	1.42
Not used	0.55	9.23	0.01	2.29	0.54	6.94	--	0.02
Total	1.87	33.56	1.17	20.83	0.70	12.73	0.49	9.08
Dent								
Charcoal	3.07	29.23	2.51	22.66	0.56	6.57	1.06	9.56
Industrial fuel	--	0.20	--	0.20	--	--	--	0.12
Domestic fuel	--	0.01	--	0.01	--	--	--	--
Miscellaneous 3/	--	0.25	--	--	--	0.25	0.24	0.01
Not used	1.31	8.49	0.26	1.09	1.05	7.40	0.11	0.47
Total	4.38	38.18	2.77	23.96	1.61	14.22	1.41	10.16
Iron								
Fiber products	0.20	3.97	0.20	3.97	--	--	--	--
Charcoal	0.65	5.60	0.65	5.60	--	--	0.28	2.36
Industrial fuel	0.12	2.31	--	--	0.12	2.31	--	--
Domestic fuel	0.01	0.32	0.01	0.32	--	--	--	0.13
Miscellaneous 3/	0.08	0.16	0.05	0.10	0.03	0.06	0.11	1.73
Not used	1.14	9.39	0.46	3.75	0.68	5.64	0.16	1.59
Total	2.20	21.75	1.37	13.74	0.83	8.01	0.55	5.81

(Table 16 continued on next page)

(Table 16 continued)

County and type of use	Wood residue							
	Total		Coarse 1/		Fine 2/		Bark	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
Madison								
Fiber products	3.05	13.32	3.05	13.32	--	--	--	--
Charcoal	0.10	2.95	0.10	2.95	--	--	0.04	1.25
Industrial fuel	1.82	9.28	--	--	1.82	9.28	--	--
Domestic fuel	0.01	1.16	0.01	0.96	--	0.20	0.01	0.41
Miscellaneous 3/	--	--	--	--	--	--	1.28	5.60
Not used	0.14	8.84	0.07	5.23	0.07	3.61	0.03	2.21
Total	5.12	35.55	3.23	22.46	1.89	13.09	1.36	9.47
Oregon								
Charcoal	2.72	39.19	2.60	29.05	0.12	10.14	1.11	12.24
Domestic fuel	0.05	0.42	0.05	0.42	--	--	0.02	0.18
Not used	1.43	7.13	--	0.07	1.43	7.06	0.03	0.04
Total	4.20	46.74	2.65	29.54	1.55	17.20	1.16	12.46
Reynolds								
Fiber products	0.43	5.85	0.43	5.85	--	--	--	--
Charcoal	5.17	48.24	4.78	45.12	0.39	3.12	1.71	16.15
Industrial fuel	0.73	11.39	--	1.43	0.73	9.96	--	--
Domestic fuel	--	0.20	--	0.20	--	--	--	0.08
Miscellaneous 3/	0.02	1.22	--	0.44	0.02	0.78	0.53	5.76
Not used	2.05	25.75	0.09	4.56	1.96	21.19	0.12	2.82
Total	8.40	92.65	5.30	57.60	3.10	35.05	2.36	24.81
Ripley								
Fiber products	--	0.94	--	0.94	--	--	--	--
Charcoal	0.82	15.48	0.82	15.05	--	0.43	0.35	5.11
Domestic fuel	--	0.84	--	0.84	--	--	--	0.13
Miscellaneous 3/	--	0.06	--	--	--	0.06	--	0.02
Not used	1.89	29.26	0.89	12.44	1.00	16.82	0.37	7.11
Total	2.71	46.58	1.71	29.27	1.00	17.31	0.72	12.37
St Francois								
Domestic fuel	--	0.22	--	0.22	--	--	--	0.09
Miscellaneous 3/	--	0.48	--	0.22	--	0.26	--	0.09
Total	--	0.70	--	0.44	--	0.26	--	0.18
Shannon								
Fiber products	1.70	7.34	1.19	7.34	0.51	--	--	--
Charcoal	6.42	29.68	6.42	28.33	--	1.35	2.73	12.03
Industrial fuel	0.15	2.85	0.13	0.42	0.02	2.43	--	1.52
Domestic fuel	--	0.76	--	0.76	--	--	--	0.45
Miscellaneous 3/	2.33	0.05	--	--	2.33	0.05	0.56	1.78
Not used	1.65	18.28	--	--	1.65	18.28	1.10	0.13
Total	12.25	58.96	7.74	36.85	4.51	22.11	4.39	15.91
Washington								
Fiber products	2.01	8.04	2.01	8.04	--	--	--	--
Charcoal	--	3.35	--	3.35	--	--	--	1.41
Domestic fuel	--	0.08	--	0.08	--	--	--	0.03
Miscellaneous 3/	2.04	4.73	0.55	--	1.49	4.73	1.00	3.42
Not used	0.49	2.32	0.31	0.23	0.18	2.09	0.13	0.10
Total	4.54	18.52	2.87	11.70	1.67	6.82	1.13	4.96

(Table 16 continued on next page)

(Table 16 continued)

County and type of use	Wood residue							
	Total		Coarse 1/		Fine 2/		Bark	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
Wayne								
Fiber products	0.94	3.08	0.94	3.08	--	--	0.40	1.31
Charcoal	1.28	10.07	1.28	10.07	--	--	0.54	4.29
Industrial fuel	0.55	1.79	--	--	0.55	1.79	--	--
Domestic fuel	--	0.58	--	0.58	--	--	--	0.23
Miscellaneous 3/	--	0.40	--	0.40	--	--	--	0.17
Not used	3.11	16.44	1.49	6.32	1.62	10.12	0.64	2.70
Total	5.88	32.36	3.71	20.45	2.17	11.91	1.58	8.70
All counties								
Fiber products	9.50	53.17	7.82	50.01	1.68	3.16	0.40	1.31
Charcoal	26.36	216.23	25.13	193.02	1.23	23.21	10.26	75.07
Industrial fuel	3.85	31.86	0.20	5.69	3.65	26.17	0.03	3.21
Domestic fuel	0.11	15.95	0.11	15.59	--	0.36	0.04	6.42
Miscellaneous 3/	4.67	15.30	0.71	3.01	3.96	12.29	4.16	21.93
Not used	21.56	165.75	7.71	45.33	13.85	120.42	4.30	25.57
Total	66.05	498.26	41.68	312.65	24.37	185.61	19.19	133.51
SOUTHWEST OZARKS								
Barry								
Charcoal	--	2.56	--	2.56	--	--	--	1.00
Domestic fuel	0.02	3.74	0.02	3.74	--	--	0.01	1.56
Miscellaneous 3/	0.30	3.83	--	--	0.30	3.83	--	--
Not used	0.50	--	0.50	--	--	--	0.12	--
Total	0.82	10.13	0.52	6.30	0.30	3.83	0.13	2.56
Christian								
Charcoal	--	4.07	--	4.07	--	--	--	1.70
Industrial fuel	--	2.36	--	0.18	--	2.18	--	0.08
Domestic fuel	--	1.58	--	1.47	--	0.11	--	0.62
Miscellaneous 3/	--	0.89	--	--	--	0.89	--	--
Not used	--	0.15	--	--	--	0.15	--	--
Total	--	9.05	--	5.72	--	3.33	--	2.40
Douglas								
Charcoal	0.17	7.68	0.16	7.52	0.01	0.16	0.07	3.20
Miscellaneous 3/	0.01	0.67	--	--	0.01	0.67	--	--
Not used	0.12	4.05	0.03	0.31	0.09	3.74	0.01	0.13
Total	0.30	12.40	0.19	7.83	0.11	4.57	0.08	3.33
Howell								
Fiber products	--	5.73	--	5.73	--	--	--	--
Charcoal	0.80	14.41	0.80	9.18	--	5.23	0.34	3.90
Industrial fuel	0.06	9.01	0.04	4.81	0.02	4.20	0.01	2.90
Miscellaneous 3/	0.46	0.01	--	0.01	0.46	--	0.10	1.73
Not used	1.19	6.69	0.75	2.93	0.44	3.76	0.37	1.32
Total	2.51	35.85	1.59	22.66	0.92	13.19	0.82	9.85
Mcdonald								
Charcoal	--	1.90	--	1.90	--	--	--	0.79
Domestic fuel	--	0.36	--	0.36	--	--	--	0.15
Miscellaneous 3/	--	1.32	--	--	--	1.32	--	--
Total	--	3.58	--	2.26	--	1.32	--	0.94

(Table 16 continued on next page)

(Table 16 continued)

County and type of use	Wood residue							
	Total		Coarse 1/		Fine 2/		Bark	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
Newton								
Charcoal	--	0.05	--	0.05	--	--	--	0.02
Industrial fuel	--	1.58	--	0.83	--	0.75	--	0.43
Domestic fuel	--	6.72	--	6.72	--	--	--	2.87
Miscellaneous 3/	--	1.02	--	--	--	1.02	--	--
Not used	--	13.81	--	6.75	--	7.06	--	2.87
Total	--	23.18	--	14.35	--	8.83	--	6.19
Ozark								
Charcoal	0.35	3.98	0.31	2.74	0.04	1.24	0.09	1.14
Domestic fuel	--	--	--	--	--	--	--	--
Miscellaneous 3/	0.18	0.08	--	--	0.18	0.08	--	0.01
Not used	0.16	0.56	0.13	0.18	0.03	0.38	0.14	0.09
Total	0.69	4.62	0.44	2.92	0.25	1.70	0.23	1.24
Stone								
Domestic fuel	--	0.03	--	0.03	--	--	--	0.03
Miscellaneous 3/	--	0.02	--	--	--	0.02	--	--
Total	--	0.05	--	0.03	--	0.02	--	0.03
Taney								
Charcoal	--	0.28	--	0.28	--	--	--	0.12
Industrial fuel	0.02	--	0.02	--	--	--	--	--
Domestic fuel	0.04	0.03	0.04	0.03	--	--	0.01	0.02
Miscellaneous 3/	2.31	0.08	1.39	--	0.92	0.08	0.34	--
Not used	0.45	0.10	0.34	--	0.11	0.10	0.09	--
Total	2.82	0.49	1.79	0.31	1.03	0.18	0.44	0.14
Texas								
Fiber products	--	6.26	--	5.79	--	0.47	--	--
Charcoal	2.47	21.20	2.47	21.20	--	--	0.99	8.93
Industrial fuel	0.16	6.48	--	--	0.16	6.48	--	--
Miscellaneous 3/	6.45	1.12	3.63	--	2.82	1.12	1.55	2.46
Not used	2.37	9.41	1.13	1.11	1.24	8.30	0.59	0.64
Total	11.45	44.47	7.23	28.10	4.22	16.37	3.13	12.03
Webster								
Charcoal	--	2.91	--	2.91	--	--	--	1.22
Domestic fuel	--	0.10	--	0.10	--	--	--	0.04
Miscellaneous 3/	--	0.16	--	0.07	--	0.09	--	0.03
Not used	--	2.21	--	0.32	--	1.89	--	0.23
Total	--	5.38	--	3.40	--	1.98	--	1.52
Wright								
Charcoal	0.06	7.26	0.06	7.26	--	--	0.02	3.06
Domestic fuel	0.01	4.04	0.01	4.04	--	--	0.01	1.65
Miscellaneous 3/	--	3.12	--	--	--	3.12	--	--
Not used	0.04	3.45	--	--	0.04	3.45	--	--
Total	0.11	17.87	0.07	11.30	0.04	6.57	0.03	4.71

(Table 16 continued on next page)

(Table 16 continued)

County and type of use	Wood residue							
	Total		Coarse 1/		Fine 2/		Bark	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
All counties								
Fiber products	--	11.99	--	11.52	--	0.47	--	--
Charcoal	3.85	66.30	3.80	59.67	0.05	6.63	1.51	25.08
Industrial fuel	0.24	19.43	0.06	5.82	0.18	13.61	0.01	3.41
Domestic fuel	0.07	16.60	0.07	16.49	--	0.11	0.03	6.94
Miscellaneous 3/	9.71	12.32	5.02	0.08	4.69	12.24	1.99	4.23
Not used	4.83	40.43	2.88	11.60	1.95	28.83	1.32	5.28
Total	18.70	167.07	11.83	105.18	6.87	61.89	4.86	44.94
NORTHWEST OZARK UNIT								
Benton								
Domestic fuel	--	0.06	--	0.06	--	--	--	0.03
Miscellaneous 3/	--	--	--	--	--	--	--	0.03
Not used	--	0.04	--	--	--	0.04	--	--
Total	--	0.10	--	0.06	--	0.04	--	0.06
Camden								
Industrial fuel	0.23	--	--	--	0.23	--	--	--
Domestic fuel	0.16	0.09	0.16	0.09	--	--	0.04	0.04
Miscellaneous 3/	0.48	0.14	0.48	0.14	--	--	0.12	0.05
Not used	0.15	0.50	--	0.23	0.15	0.27	--	0.09
Total	1.02	0.73	0.64	0.46	0.38	0.27	0.16	0.18
Dallas								
Charcoal	--	0.23	--	0.23	--	--	--	0.09
Domestic fuel	--	0.88	--	0.88	--	--	--	0.36
Miscellaneous 3/	0.03	0.21	0.02	--	0.01	0.21	0.01	--
Not used	--	0.53	--	0.07	--	0.46	--	0.04
Total	0.03	1.85	0.02	1.18	0.01	0.67	0.01	0.49
Hickory								
Domestic fuel	0.03	0.19	0.03	0.19	--	--	0.01	0.08
Miscellaneous 3/	--	0.19	--	--	--	0.19	--	--
Not used	0.02	1.66	--	1.10	0.02	0.56	--	0.45
Total	0.05	2.04	0.03	1.29	0.02	0.75	0.01	0.53
Laclede								
Industrial fuel	--	1.06	--	0.62	--	0.44	--	0.38
Domestic fuel	--	1.21	--	1.21	--	--	--	0.51
Miscellaneous 3/	--	0.21	--	0.09	--	0.12	--	0.07
Not used	--	4.42	--	1.93	--	2.49	--	0.84
Total	--	6.90	--	3.85	--	3.05	--	1.80
Maries								
Charcoal	--	1.77	--	1.77	--	--	--	0.72
Domestic fuel	--	0.35	--	0.27	--	0.08	--	0.11
Miscellaneous 3/	--	0.10	--	--	--	0.10	--	--
Not used	--	1.01	--	--	--	1.01	--	--
Total	--	3.23	--	2.04	--	1.19	--	0.83

(Table 16 continued on next page)

(Table 16 continued)

County and type of use	Wood residue							
	Total		Coarse 1/		Fine 2/		Bark	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
Miller								
Charcoal	--	0.21	--	0.21	--	--	--	0.09
Industrial fuel	--	3.81	--	2.25	--	1.56	--	1.18
Domestic fuel	0.43	1.30	0.13	1.17	0.30	0.13	0.03	0.49
Miscellaneous 3/	0.39	5.15	0.39	2.35	--	2.80	1.32	1.00
Not used	--	0.23	--	--	--	0.23	--	--
Total	0.82	10.70	0.52	5.98	0.30	4.72	1.35	2.76
Morgan								
Domestic fuel	--	0.91	--	0.91	--	--	--	0.37
Miscellaneous 3/	--	0.07	--	0.05	--	0.02	--	0.02
Not used	--	0.54	--	--	--	0.54	--	--
Total	--	1.52	--	0.96	--	0.56	--	0.39
Phelps								
Charcoal	--	11.48	--	11.48	--	--	--	4.86
Industrial fuel	--	0.21	--	--	--	0.21	--	--
Domestic fuel	0.05	0.56	0.05	0.56	--	--	0.02	0.24
Miscellaneous 3/	--	0.28	--	--	--	0.28	--	--
Not used	0.02	6.52	--	--	0.02	6.52	--	--
Total	0.07	19.05	0.05	12.04	0.02	7.01	0.02	5.10
Polk								
Domestic fuel	--	0.28	--	0.28	--	--	--	--
Miscellaneous 3/	--	1.29	--	--	--	1.29	--	1.13
Not used	--	2.82	--	2.50	--	0.32	--	--
Total	--	4.39	--	2.78	--	1.61	--	1.13
Pulaski								
Charcoal	--	6.04	--	6.04	--	--	--	0.81
Industrial fuel	--	0.02	--	--	--	0.02	--	--
Domestic fuel	--	2.02	--	2.02	--	--	--	0.81
Miscellaneous 3/	--	1.63	--	--	--	1.63	--	1.72
Not used	--	3.05	--	--	--	3.05	--	--
Total	--	12.76	--	8.06	--	4.70	--	3.34
St Clair								
Fiber products	--	0.01	--	--	--	0.01	--	--
Charcoal	--	0.02	--	0.02	--	--	--	0.01
Domestic fuel	0.01	0.37	0.01	0.37	--	--	--	0.16
Miscellaneous 3/	--	0.01	--	--	--	0.01	--	--
Not used	0.01	0.20	--	--	0.01	0.20	--	--
Total	0.02	0.61	0.01	0.39	0.01	0.22	--	0.17
All counties								
Fiber products	--	0.01	--	--	--	0.01	--	--
Charcoal	--	19.75	--	19.75	--	--	--	6.58
Industrial fuel	0.23	5.10	--	2.87	0.23	2.23	--	1.56
Domestic fuel	0.68	8.22	0.38	8.01	0.30	0.21	0.10	3.20
Miscellaneous 3/	0.90	9.28	0.89	2.63	0.01	6.65	1.45	4.02
Not used	0.20	21.52	--	5.83	0.20	15.69	--	1.42
Total	2.01	63.88	1.27	39.09	0.74	24.79	1.55	16.78

(Table 16 continued on next page)

(Table 16 continued)

County and type of use	Wood residue							
	Total		Coarse 1/		Fine 2/		Bark	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
PRAIRIE UNIT								
Audrain								
Fiber products	--	2.78	--	2.78	--	--	--	--
Industrial fuel	--	2.78	--	2.78	--	--	--	--
Domestic fuel	--	2.06	--	1.79	--	0.27	--	0.23
Miscellaneous 3/	--	4.12	--	--	--	4.12	--	2.26
Not used	--	0.38	--	0.31	--	0.07	--	0.58
Total	--	12.12	--	7.66	--	4.46	--	3.07
Barton								
Domestic fuel	--	2.31	--	2.31	--	--	--	0.98
Miscellaneous 3/	--	1.35	--	--	--	1.35	--	--
Not used	--	10.24	--	6.47	--	3.77	--	2.75
Total	--	13.90	--	8.78	--	5.12	--	3.73
Bates								
Domestic fuel	--	2.52	--	2.26	--	0.26	--	0.91
Miscellaneous 3/	--	--	--	--	--	--	--	--
Not used	--	4.57	--	2.22	--	2.35	--	0.89
Total	--	7.09	--	4.48	--	2.61	--	1.80
Buchanan								
Industrial fuel	--	10.30	--	8.16	--	2.14	--	1.48
Miscellaneous 3/	--	2.79	--	--	--	2.79	--	1.93
Total	--	13.09	--	8.16	--	4.93	--	3.41
Caldwell								
Domestic fuel	--	0.58	--	0.58	--	--	--	0.25
Miscellaneous 3/	--	0.13	--	--	--	0.13	--	--
Not used	--	0.20	--	--	--	0.20	--	--
Total	--	0.91	--	0.58	--	0.33	--	0.25
Cass								
Domestic fuel	--	0.14	--	0.14	--	--	--	0.05
Miscellaneous 3/	--	0.16	--	--	--	0.16	--	--
Not used	0.45	2.70	0.17	1.12	0.28	1.58	0.13	0.77
Total	0.45	3.00	0.17	1.26	0.28	1.74	0.13	0.82
Clark								
Industrial fuel	--	0.87	--	0.06	--	0.81	--	0.02
Domestic fuel	--	4.74	--	4.74	--	--	--	1.93
Miscellaneous 3/	--	0.41	--	--	--	0.41	--	--
Not used	--	11.01	--	5.73	--	5.28	--	2.46
Total	--	17.03	--	10.53	--	6.50	--	4.41
Cooper								
Domestic fuel	--	0.09	--	0.09	--	--	--	--
Miscellaneous 3/	--	0.54	--	--	--	0.54	--	0.38
Not used	--	0.83	--	0.83	--	--	--	--
Total	--	1.46	--	0.92	--	0.54	--	0.38

(Table 16 continued on next page)

(Table 16 continued)

County and type of use	Wood residue							
	Total		Coarse 1/		Fine 2/		Bark	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
De Kalb								
Industrial fuel	--	3.64	--	3.64	--	--	--	--
Miscellaneous 3/	--	1.06	--	--	--	1.06	--	1.54
Not used	--	1.06	--	--	--	1.06	--	--
Total	--	5.76	--	3.64	--	2.12	--	1.54
Gentry								
Industrial fuel	--	3.36	--	3.36	--	--	--	1.43
Not used	--	1.95	--	--	--	1.95	--	--
Total	--	5.31	--	3.36	--	1.95	--	1.43
Greene								
Domestic fuel	--	0.14	--	0.09	--	0.05	--	0.04
Miscellaneous 3/	--	0.14	--	0.09	--	0.05	--	0.04
Total	--	0.28	--	0.18	--	0.10	--	0.08
Grundy								
Domestic fuel	--	0.93	--	0.93	--	--	--	0.38
Miscellaneous 3/	--	0.54	--	--	--	0.54	--	--
Total	--	1.47	--	0.93	--	0.54	--	0.38
Harrison								
Domestic fuel	--	0.93	--	0.93	--	--	--	0.39
Miscellaneous 3/	--	0.54	--	--	--	0.54	--	--
Total	--	1.47	--	0.93	--	0.54	--	0.39
Henry								
Domestic fuel	0.03	1.71	0.03	1.71	--	--	0.01	0.71
Miscellaneous 3/	0.02	0.97	--	--	0.02	0.97	--	--
Not used	--	3.14	--	1.97	--	1.17	--	0.82
Total	0.05	5.82	0.03	3.68	0.02	2.14	0.01	1.53
Knox								
Fiber products	--	3.54	--	3.54	--	--	--	--
Domestic fuel	--	0.23	--	0.23	--	--	--	0.10
Miscellaneous 3/	--	--	--	--	--	--	--	1.44
Not used	--	2.22	--	0.02	--	2.20	--	0.01
Total	--	5.99	--	3.79	--	2.20	--	1.55
Lafayette								
Domestic fuel	--	0.16	--	0.16	--	--	--	0.07
Miscellaneous 3/	--	0.09	--	--	--	0.09	--	--
Total	--	0.25	--	0.16	--	0.09	--	0.07
Lawrence								
Domestic fuel	--	0.08	--	0.08	--	--	--	0.03
Not used	--	0.13	--	0.05	--	0.08	--	0.02
Total	--	0.21	--	0.13	--	0.08	--	0.05
Lewis								
Domestic fuel	--	0.37	--	0.37	--	--	--	0.09
Miscellaneous 3/	--	0.11	--	--	--	0.11	--	--
Not used	--	0.69	--	0.37	--	0.32	--	0.22
Total	--	1.17	--	0.74	--	0.43	--	0.31

(Table 16 continued on next page)

(Table 16 continued)

County and type of use	Wood residue						Bark	
	Total		Coarse 1/		Fine 2/			
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
Lincoln								
Fiber products	--	8.33	--	8.33	--	--	--	--
Domestic fuel	--	0.37	--	0.37	--	--	--	0.47
Miscellaneous 3/	--	6.18	--	0.74	--	5.44	--	3.54
Not used	--	0.05	--	--	--	0.05	--	--
Total	--	14.93	--	9.44	--	5.49	--	4.01
Linn								
Domestic fuel	--	0.17	--	0.15	--	0.02	--	0.07
Miscellaneous 3/	--	0.02	--	--	--	0.02	--	--
Not used	--	0.05	--	--	--	0.05	--	--
Total	--	0.24	--	0.15	--	0.09	--	0.07
Livingston								
Fiber products	--	5.25	--	5.25	--	--	--	--
Industrial fuel	--	6.36	--	3.30	--	3.06	--	1.40
Miscellaneous 3/	--	2.84	--	0.58	--	2.26	--	2.48
Total	--	14.45	--	9.13	--	5.32	--	3.88
Marion								
Domestic fuel	0.01	0.48	0.01	0.48	--	--	--	0.19
Miscellaneous 3/	--	0.55	--	--	--	0.55	--	--
Not used	--	0.75	--	0.65	--	0.10	--	0.27
Total	0.01	1.78	0.01	1.13	--	0.65	--	0.46
Monroe								
Domestic fuel	--	0.67	--	0.67	--	--	--	0.22
Miscellaneous 3/	--	0.21	--	--	--	0.21	--	--
Not used	--	0.47	--	0.19	--	0.28	--	0.14
Total	--	1.35	--	0.86	--	0.49	--	0.36
Pettis								
Industrial fuel	--	--	--	--	--	--	0.24	0.62
Total	--	--	--	--	--	--	0.24	0.62
Pike								
Charcoal	--	1.90	--	1.90	--	--	--	0.78
Industrial fuel	--	1.43	--	0.30	--	1.13	--	0.12
Domestic fuel	--	4.32	--	4.32	--	--	--	0.25
Miscellaneous 3/	--	2.15	--	0.74	--	1.41	--	3.46
Not used	--	9.50	--	4.94	--	4.56	--	0.50
Total	--	19.30	--	12.20	--	7.10	--	5.11
Platte								
Not used	--	4.40	--	2.78	--	1.62	--	1.17
Total	--	4.40	--	2.78	--	1.62	--	1.17
Ralls								
Fiber products	--	1.30	--	1.30	--	--	--	--
Industrial fuel	--	0.14	--	0.14	--	--	--	0.05
Domestic fuel	--	0.10	--	0.10	--	--	--	0.02
Miscellaneous 3/	--	0.70	--	--	--	0.70	--	1.38
Not used	--	3.94	--	2.05	--	1.89	--	0.14
Total	--	6.18	--	3.59	--	2.59	--	1.59

(Table 16 continued on next page)

(Table 16 continued)

County and type of use	Wood residue							
	Total		Coarse 1/		Fine 2/		Bark	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
Randolph								
Industrial fuel	--	0.08	--	0.03	--	0.05	--	0.02
Domestic fuel	--	3.90	--	3.90	--	--	--	1.65
Miscellaneous 3/	--	2.50	--	--	--	2.50	--	--
Not used	--	0.94	--	0.75	--	0.19	--	0.32
Total	--	7.42	--	4.68	--	2.74	--	1.99
Saline								
Fiber products	--	0.10	--	--	--	0.10	--	--
Domestic fuel	--	0.04	--	0.04	--	--	--	0.02
Not used	--	0.16	--	0.15	--	0.01	--	0.06
Total	--	0.30	--	0.19	--	0.11	--	0.08
Schuyler								
Domestic fuel	--	0.07	--	0.07	--	--	--	0.03
Miscellaneous 3/	--	0.06	--	--	--	0.06	--	--
Not used	--	0.03	--	0.03	--	--	--	0.01
Total	--	0.16	--	0.10	--	0.06	--	0.04
Scotland								
Domestic fuel	--	0.45	--	0.45	--	--	--	0.18
Not used	--	0.36	--	0.06	--	0.30	--	0.02
Total	--	0.81	--	0.51	--	0.30	--	0.20
Shelby								
Domestic fuel	--	0.45	--	0.45	--	--	--	0.19
Miscellaneous 3/	--	0.25	--	--	--	0.25	--	--
Not used	--	0.61	--	0.38	--	0.23	--	0.16
Total	--	1.31	--	0.83	--	0.48	--	0.35
Vernon								
Domestic fuel	--	0.32	--	0.32	--	--	--	0.13
Not used	--	2.18	--	1.26	--	0.92	--	0.54
Total	--	2.50	--	1.58	--	0.92	--	0.67
All counties								
Fiber products	--	21.30	--	21.20	--	0.10	--	--
Charcoal	--	1.90	--	1.90	--	--	--	0.78
Industrial fuel	--	28.96	--	21.77	--	7.19	0.24	5.14
Domestic fuel	0.04	28.33	0.04	27.73	--	0.60	0.01	9.58
Miscellaneous 3/	0.02	28.41	--	2.15	0.02	26.26	--	18.45
Not used	0.45	62.56	0.17	32.33	0.28	30.23	0.13	11.85
Total	0.51	171.46	0.21	107.08	0.30	64.38	0.38	45.80

(Table 16 continued on next page)

(Table 16 continued)

County and type of use	Wood residue							
	Total		Coarse 1/		Fine 2/		Bark	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
RIVERBORDER UNIT								
Boone								
Domestic fuel	--	3.87	--	3.87	--	--	--	1.01
Miscellaneous 3/	--	1.98	--	--	--	1.98	--	0.12
Not used	--	1.81	--	0.97	--	0.84	--	0.86
Total	--	7.66	--	4.84	--	2.82	--	1.99
Callaway								
Fiber products	--	5.55	--	5.55	--	--	--	--
Domestic fuel	0.01	0.28	0.01	0.28	--	--	--	0.11
Miscellaneous 3/	1.80	3.43	1.14	--	0.66	3.43	0.28	2.26
Not used	--	0.11	--	0.09	--	0.02	--	0.04
Total	1.81	9.37	1.15	5.92	0.66	3.45	0.28	2.41
Cape Girardeau								
Fiber products	--	27.19	--	17.19	--	1 --	--	2.43
Miscellaneous 3/	--	--	--	--	--	--	--	2.54
Not used	--	--	--	--	--	--	--	2.27
Total	--	27.19	--	17.19	--	1 --	--	7.24
Dunklin								
Domestic fuel	--	0.40	--	0.40	--	--	--	0.17
Miscellaneous 3/	--	0.03	--	--	--	0.03	--	--
Not used	0.02	0.41	0.01	0.13	0.01	0.28	0.01	0.06
Total	0.02	0.84	0.01	0.53	0.01	0.31	0.01	0.23
Franklin								
Fiber products	--	8.12	--	8.12	--	--	--	--
Industrial fuel	--	1.10	--	1.10	--	--	--	0.68
Domestic fuel	--	1.09	--	0.19	--	0.90	--	0.08
Miscellaneous 3/	0.24	4.79	0.18	--	0.06	4.79	0.05	3.45
Not used	0.04	0.94	--	--	0.04	0.94	--	--
Total	0.28	16.04	0.18	9.41	0.10	6.63	0.05	4.21
Gasconade								
Charcoal	--	1.24	--	1.24	--	--	--	0.52
Domestic fuel	--	2.35	--	2.35	--	--	--	0.96
Miscellaneous 3/	--	2.10	--	--	--	2.10	--	--
Total	--	5.69	--	3.59	--	2.10	--	1.48
Howard								
Fiber products	--	4.44	--	4.44	--	--	--	--
Industrial fuel	--	2.58	--	--	--	2.58	--	--
Domestic fuel	--	0.15	--	0.15	--	--	--	0.05
Miscellaneous 3/	--	0.86	--	--	--	0.86	--	1.89
Not used	--	1.33	--	1.33	--	--	--	0.47
Total	--	9.36	--	5.92	--	3.44	--	2.41
Jefferson								
Domestic fuel	0.07	0.21	0.01	0.04	0.06	0.17	--	0.02
Miscellaneous 3/	0.01	0.18	0.01	0.10	--	0.08	--	0.04
Not used	0.10	0.29	0.10	0.29	--	--	0.04	0.13
Total	0.18	0.68	0.12	0.43	0.06	0.25	0.04	0.19

(Table 16 continued on next page)

(Table 16 continued)

County and type of use	Wood residue							
	Total		Coarse 1/		Fine 2/		Bark	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
Moniteau								
Industrial fuel	--	0.08	--	--	--	0.08	--	--
Domestic fuel	--	0.46	--	0.46	--	--	--	0.19
Miscellaneous 3/	--	0.19	--	--	--	0.19	--	--
Total	--	0.73	--	0.46	--	0.27	--	0.19
Montgomery								
Industrial fuel	--	2.10	--	2.10	--	--	--	1.30
Domestic fuel	--	0.46	--	0.46	--	--	--	0.20
Miscellaneous 3/	--	0.47	--	--	--	0.47	--	--
Not used	--	3.23	--	--	--	3.23	--	--
Total	--	6.26	--	2.56	--	3.70	--	1.50
New Madrid								
Fiber products	--	7.49	--	7.49	--	--	--	--
Industrial fuel	--	4.36	--	--	--	4.36	--	3.13
Domestic fuel	--	0.47	--	0.47	--	--	--	--
Miscellaneous 3/	--	0.05	--	--	--	0.05	--	0.06
Not used	--	0.22	--	--	--	0.22	--	0.14
Total	--	12.59	--	7.96	--	4.63	--	3.33
Osage								
Charcoal	--	6.38	--	6.38	--	--	--	1.09
Miscellaneous 3/	0.01	2.64	0.01	--	--	2.64	--	1.51
Not used	--	1.08	--	--	--	1.08	--	--
Total	0.01	10.10	0.01	6.38	--	3.72	--	2.60
Pemiscot								
Industrial fuel	--	2.31	--	0.89	--	1.42	--	0.65
Total	--	2.31	--	0.89	--	1.42	--	0.65
Perry								
Fiber products	--	33.43	--	33.43	--	--	--	--
Charcoal	--	0.51	--	--	--	0.51	--	--
Industrial fuel	--	19.79	--	--	--	19.79	--	--
Domestic fuel	--	0.31	--	0.31	--	--	--	--
Miscellaneous 3/	--	2.58	--	0.88	--	1.70	--	14.90
Not used	0.03	0.34	0.02	0.10	0.01	0.24	--	0.18
Total	0.03	56.96	0.02	34.72	0.01	22.24	--	15.08
St Charles								
Domestic fuel	--	3.70	--	3.70	--	--	--	1.56
Miscellaneous 3/	--	2.15	--	--	--	2.15	--	--
Total	--	5.85	--	3.70	--	2.15	--	1.56
Ste Genevieve								
Fiber products	0.30	2.73	0.30	2.73	--	--	--	--
Industrial fuel	0.01	0.18	--	--	0.01	0.18	--	--
Domestic fuel	--	1.18	--	1.18	--	--	--	0.51
Miscellaneous 3/	0.20	1.78	--	--	0.20	1.78	0.13	1.16
Not used	0.12	2.81	0.10	1.46	0.02	1.35	0.02	0.62
Total	0.63	8.68	0.40	5.37	0.23	3.31	0.15	2.29

(Table 16 continued on next page)

(Table 16 continued)

County and type of use	Wood residue							
	Total		Coarse 1/		Fine 2/		Bark	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
Stoddard								
Fiber products	0.04	5.36	0.04	5.36	--	--	--	--
Domestic fuel	0.03	3.02	0.03	3.02	--	--	0.01	1.25
Miscellaneous 3/	--	--	--	--	--	--	0.02	2.28
Not used	0.04	5.51	--	0.40	0.04	5.11	--	0.17
Total	0.11	13.89	0.07	8.78	0.04	5.11	0.03	3.70
Warren								
Miscellaneous 3/	--	0.29	--	0.18	--	0.11	--	0.08
Total	--	0.29	--	0.18	--	0.11	--	0.08
All counties								
Fiber products	0.34	94.31	0.34	84.31	--	1 --	--	2.43
Charcoal	--	8.13	--	7.62	--	0.51	--	1.61
Industrial fuel	0.01	32.50	--	4.09	0.01	28.41	--	5.76
Domestic fuel	0.11	17.95	0.05	16.88	0.06	1.07	0.01	6.11
Miscellaneous 3/	2.26	23.52	1.34	1.16	0.92	22.36	0.48	30.29
Not used	0.35	18.08	0.23	4.77	0.12	13.31	0.07	4.94
Total	3.07	194.49	1.96	118.83	1.11	75.66	0.56	51.14
STATE TOTAL								
Fiber products	9.84	180.78	8.16	167.04	1.68	13.74	0.40	3.74
Charcoal	30.21	312.31	28.93	281.96	1.28	30.35	11.77	109.12
Industrial fuel	4.33	117.85	0.26	40.24	4.07	77.61	0.28	19.08
Domestic fuel	1.01	87.05	0.65	84.70	0.36	2.35	0.19	32.25
Miscellaneous 3/	17.56	88.83	7.96	9.03	9.60	79.80	8.08	78.92
Not used	27.39	308.34	10.99	99.86	16.40	208.48	5.82	49.06
Total	90.34	1,095.16	56.95	682.83	33.39	412.33	26.54	292.17

1/ Suitable for chipping such as slabs,edgings,veneer cores,etc.
2/ Not suitable for chipping such as sawdust,veneer clippings,etc.
3/ Livestock bedding, mulch, small dimension, and specialty items.

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Smith, W. Brad.; Jones, Shelby.
1990. **Missouri timber industry—an assessment of timber product output and use.** Resour. Bull. NC-120. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station. 51 p.

Discusses recent Missouri forest industry trends; production and receipts of saw logs; and production of charcoal, veneer logs, cooperage logs, and other products in 1987. Reports on logging residue, on wood and bark residue generated at primary wood-using mills, and on disposition of this residue.

KEY WORDS: Saw logs, charcoal, cooperage, veneer logs, roundwood, residue.

Our job at the North Central Forest Experiment Station is discovering and creating new knowledge and technology in the field of natural resources and conveying this information to the people who can use it. As a new generation of forests emerges in our region, managers are confronted with two unique challenges: (1) Dealing with the great diversity in composition, quality, and ownership of the forests, and (2) Reconciling the conflicting demands of the people who use them. Helping the forest manager meet these challenges while protecting the environment is what research at North Central is all about.